

TABLES
OF
THE INCOMPLETE
BETA-FUNCTION

PREPARED UNDER THE DIRECTION OF AND EDITED BY
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PREFACE

Tables of the Incomplete B-Function have seemed to me essential to the modern theory of statistics ever since I personally learnt, about the year 1894, to appreciate two facts, namely how closely the sum of n terms of a hypergeometrical series could be represented by the partial area of the curve

$$y = y_0 x^{p-1} (1-x)^{q-1},$$

and secondly how imperfect was Laplace's endeavour to represent such areas by a series based on the normal curve and its differential coefficients. Various methods were given in my lectures on statistics for evaluating the integral

$$B_x(p, q) = \int_0^x x^{p-1} (1-x)^{q-1} dx,$$

and were used in the Biometric Laboratory for many years. In 1921, I asked Mr Herbert E. Soper then a research assistant in that Laboratory to put together various possible methods for evaluating the Incomplete B-Function, and the results of his investigations were published in the Cambridge University Press *Tracts for Computers*, as No. VII. That *Tract* is an essential companion to the present volume, and will be of service to any one seeking values of the function outside the range of arguments in these tables. But the labour required to apply some of the methods of that *Tract*, and the relatively small degree of accuracy provided by others, only emphasised in my mind the already appreciated need for computing tables which would cover some of the field. Accordingly, when the *Tables of the Incomplete Γ-Function** had been finished and their publication rendered possible by a contribution from the Department of Industrial and Scientific Research, an application was made to the same Department for help in computing tables of the Incomplete B-Function. This was a still more serious undertaking, owing both to the extent of the computing work necessary—it being a table of triple, not double entry—and to the difficulty of eventually finding means for the publication of such a voluminous work as this promised to be. The Department of Scientific and Industrial Research again came to my aid, at first by granting payment for a definite research assistant for this work, and afterwards by a definite grant for the completion of the work of computing, which extended from 1923–1932. In supervision and proof-reading the aid of members of the Department of Applied Statistics at University College, London, has been frequently drawn upon and readily granted.

The present condition of our national finances did not justify the publication of this sister volume to the *Tables of the Incomplete Γ-Function* in the manner previously adopted, and it seemed for a time as if the printing of the manuscript must be indefinitely delayed. Arrangements have finally been made by which these tables appear as one of the *Biometrika* publications. As only a small edition can be issued the price must necessarily be heavy, but purchasers may be assured that the work is sold without profit, merely at cost price.

I have to thank most cordially Dr Ethel Elderton, Dr Brenda Stoessiger and Mr E. C. Fieller, for the heavy labour of proof-reading of the tables themselves; Dr Egon S. Pearson for much aid in the preparation of the Introduction, Mr E. C. Fieller for computing help therein, and Mr Walter Lewis and the Compositors and Readers of the University Press, Cambridge, for the rapidity and accuracy with which the work has been set up. Such errors as may be found must be due to false copying of figures by the computers on the original working sheets, as the latter have been compared throughout with the text of the tables.

I cannot hope that the work is wholly free from computing errors, and shall be very grateful for any such being pointed out to me, so that eventually a list of errata may be issued.

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TABLE I

Incomplete B-Function Ratio	pp. 1-431
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TABLE II

Constants of the Curve $y = y_0 x^{p-1} (1-x)^{q-1}$ for various values of p and q	433-494
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COMPUTERS UNDER THE GRANT AND COLLABORATORS

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INTRODUCTION

(I) ORIGIN OF THE TABLES AND METHODS ADOPTED FOR COMPUTING THEM

The somewhat exaggerated use made by Laplace of the normal curve

$$y = y_0 e^{-\frac{1}{2} \frac{x^2}{\sigma^2}}$$

to represent almost any function

$$y = f(x)$$

for very considerable distances from its mode, in particular the function

$$y = y_0 x^{p-1} (1-x)^{q-1},$$

led me many years ago to seek by Laplace's own methods for expansions of unimodal functions in the form

$$f(x) = y_0 e^{-\frac{1}{2} \frac{x^2}{\sigma^2}} \times \text{a polynomial in } x,$$

where x is measured from the mode. Thus the partial area of $f(x)$, or what we may term the probability integral of the function, was expressed in what we should now call an incomplete normal moment series, or in another form a tetrachoric function series. But actual experience with the probability integrals of the curves

$$y = y_0 e^{-x} x^{p-1} \quad \text{and} \quad y = y_0 x^{p-1} (1-x)^{q-1}$$

obtained by such series was extremely unsatisfactory, and I was compelled to discard them, and to face the problem of the tabulation of the incomplete Γ - and B -functions. The work of computing the Incomplete Γ -function was first taken in hand, and the difficulties of the problem soon developed themselves; chief among these was the infinite range of x , which demanded as the power, $p-1$, of x increased in the function either a change in argument intervals, or what amounts to the same thing the expression of x in terms of the changing standard deviation. The latter course was chosen and after eight years of work the *Tables of the Incomplete Γ -Function* were published by H.M. Stationery Office in 1922.

In the case of the incomplete B -function the same problem arose, but in a less aggravated form, because the range of x is finite. It could have been met in the same manner by expressing the variate x in terms of the changing standard deviation of the curve instead of in terms of the range. But the variety of cases to which the tabled function can be applied—either directly or by transformation—raised new difficulties. In the case of either or both p and q being less than unity, the standard deviation, σ , of the curve

$$y = y_0 x^{p-1} (1-x)^{q-1}$$

given by

$$\sigma^2 = \frac{pq}{(p+q)^2(p+q+1)}$$

was not found to be wholly the best unit for the measurement of x , while in the case of transformed curves, the above expression is of course not their standard deviation. It was settled therefore to use the range, not the standard deviation, and, as increment of the argument x , to take $\frac{1}{100}$ th part of the range.

To lessen the labour of computing the trivariate function, I avoided, except for testing purposes, quadrature and decided that a recurrence formula should be made the basis of the work. This required only the computing, which was easy, of the areas of the curve for the initial low values of p and q . The function I proposed to have tabled was to be a *probability integral*; that is to say, if we represent by $B(p, q)$ the complete B -function, $= \int_0^1 x^{p-1} (1-x)^{q-1} dx$, and by $B_x(p, q)$ the incomplete B -function, or $\int_0^x x^{p-1} (1-x)^{q-1} dx$, we tabled the ratio

$$I_x(p, q) = B_x(p, q) / B(p, q) \quad \dots\dots(i).$$

The recurrence formula for $I_x(p, q)$ is the following:

$$I_x(p, q) = x I_x(p-1, q) + (1-x) I_x(p, q-1) \quad \dots\dots(ii).$$

By aid of this formula $I_x(p, q)$ could be ultimately deduced from values of the function easy to integrate

out*. In order to test the correctness of the results in any column of this $I_x(p, q)$ function for a given p and q an Euler-Maclaurin summation of the column was provided and was found very useful as a check. It runs†

Sum of column contents

$$= \frac{100q}{p+q} - 0.5 + \frac{1}{B(p, q)} \left[\frac{1}{12} (\cdot 01) (x^{p-1} (1-x)^{q-1}) - \frac{(\cdot 01)^3}{720} \frac{d^2}{dx^2} (x^{p-1} (1-x)^{q-1}) \right. \\ \left. + \frac{(\cdot 01)^5}{30240} \frac{d^4}{dx^4} (x^{p-1} (1-x)^{q-1}) - \frac{(\cdot 01)^7}{120,9600} \frac{d^6}{dx^6} (x^{p-1} (1-x)^{q-1}) + \dots \right]_0^1 \dots (iii).$$

At the head of each column of the table is given the value of the corresponding complete B-function, $B(p, q)$, so that it is possible to obtain rapidly, when it is required, the incomplete B-function itself, instead of the ratio.

In my original plan I proposed to take the argument intervals of p and q to be 0.5 from 10 to 50, and when either p or q were less than 10 to be 0.1, so that from 0 to 10 both p and q would proceed by 0.1. Here also x was to advance by .005 instead of .01 and some portion of this was actually worked out. Further, to save labour in the use of the tables p and q were both to run from 0 to 50. But on reckoning out the space the printed tables would take, I found that it would extend to considerably over 2000 pages. The publication of such a table was wholly beyond any funds likely to be at my disposal, and accordingly the table had to be ruthlessly cut down. In the first place I discarded the idea of providing a table containing all the values of both p and q up to the limit of 50. I have had printed only the values of p which are equal to or greater than the values of q . If the user of the tables requires $I_x(p, q)$ in which p is less than q then he must remember that

$$I_x(p, q) = 1 - I_{1-x}(q, p) = 1 - I_{1-x}(p', q'),$$

where $p' = q$ and $q' = p$, so that p' is now greater than q' . This reduced the amount to be printed by almost a half.

In the next place the idea of publishing any differences whatever was dropped. It would have been needful to print three sets of differences, and any reasonable number of these would have been quite inadequate at certain parts of the table. When either q or p are low and fractional the differential coefficients of the curve at one or other terminal become infinite, and the differences may diverge. The only method of overcoming this difficulty is by the aid of auxiliary tables‡, but that is not feasible when it is important to reduce the matter to be printed. Owing to the large number of differences required at some parts of the table, and to their total inadequacy at other parts I was not loath to omit them. As a matter of fact for many purposes we only need p and q to whole or half integers, and accordingly the interpolation requisite will often be with regard to x alone.

In my opinion far more serious retrenchments were the following:

(a) The adoption throughout of .01 for the increment of x . When p and q approach 50, the standard deviation of the curve is about $\frac{1}{xq}$ th of the range and 99.9 % of the curve's area falls on less than a third of the range. It would accordingly have been more advantageous if this latter part of the table had proceeded by intervals of .005 in x , but this would have added upwards of 80 pages to the printed table. The adoption of a smaller interval in the case of U - and J -curves would also have been very advantageous.

(b) The adoption of 0.5 and, further on in the table, 1.0 for the increments of p and q . This was again enforced by the limitation of space. The restriction affects peculiarly the table as applicable to U - and J -curves. In the case of U -curves, i.e. both p and q less than unity, interpolation becomes extremely difficult, and it is doubtful whether any table would be of much service which did not proceed by increments of .01 for p and q . This would have involved an addition of some 5000 additional curves, or about 1666 pages of printed matter. Even with intervals of .02, we should have required upward of 200 additional pages. Again, an effective tabulation of J -curves with increment of p as large even as .02 and 60 values of q would have demanded space for 3000 additional curves or some 1000 additional pages. I was convinced at a very early stage of the work that the effective tabulation of U - and J -curves must be omitted from the present work, and left for others to undertake at a later date.

* Use was made of formulae of type $I_x(p+1, 0.5) = I_x(p, 1.5) - \frac{2\Gamma(p+\frac{1}{2}) x^p \sqrt{1-x}}{\Gamma(p+1) \sqrt{\pi}}$, for the half-unit values of p and q .

† It seems unnecessary here to enter into special variations of this formula, such as arise from altering the limits 0 and 1. When p and q are integers, the terms in the square brackets rapidly become negligible as p and q increase.

‡ One such auxiliary table for cases $B_x(\frac{1}{2}, p)$ is given in *Biometrika*, Vol. XXII, p. 283, and is reproduced in the *Tables for Statisticians and Biometricians*, Part II, p. 176. The method will be referred to later, when dealing with interpolation.

It may be asked why certain J - and U -curves have been included. The answer lies in the fact that $B_x(\frac{1}{2})$ or $I_x(\frac{1}{2}, q)$ have special importance in practical statistics. For example, all symmetrical curves of the B-function type, i.e. $p=q$, can have their probability integrals determined by transformation to these types of U - or J -curves. Thus

$$I_x(p, p) = \frac{1}{2} \{1 + I_x(\frac{1}{2}, p)\} \\ = 1 - \frac{1}{2} I_{1-x'}(p, \frac{1}{2}) \quad \text{.....(iv)}$$

where $x' = 4(x - \frac{1}{2})^2$, or $x = \frac{1}{2}(1 + \sqrt{x'})$.

This interchange may be of some service, as interpolating for p in $I_x(p, p)$ may involve extracting entries from several pages, while the interpolation for $I_{1-x'}(p, \frac{1}{2})$ will probably need reference to one page only.

The function was computed to nine decimal places, but these were cut down to seven for publication. They might with but little recomputing of isolated values have been tabulated to eight decimals, but this seemed no particular advantage to be gained by incurring the additional cost of printing. The tables are intended in the first place for statisticians, and there are very few cases in statistical practice, wherein it is needful to ascertain a frequency or a probability to more than five figures. The additional two figures are given to provide greater accuracy for the purposes of interpolation. Should the reader feel that the tables fall short of the completeness desirable in dealing with such an important function, I may venture to remind him that the present is probably the first big attempt at tabling a trivariate function, that provide a table which would effectively cover all regions of the B-function would not only have required another eight years of computing, but would have more than quadrupled the volume of the work, thus preventing or indefinitely delaying its publication; and finally that on studying the following account of the uses of the tables, he may convince himself that they are capable of giving at least a great deal of information in a variety of inquiries.

(II) USES OF THE TABLES

(a) *To find the subrange frequencies of any distribution graduated by*

$$y = y_0(x + a_1)^{p-1}(a_2 - x)^{q-1} \quad \text{.....(v)}$$

The curve may be transposed to $x = -a_1$ as origin, then if $b = a_1 + a_2$, the curve may be written as

$$y = y_0' x^{p-1} (b - x)^{q-1},$$

or if $x = bx'$ as

$$y = y_0'' x'^{p-1} (1 - x')^{q-1}.$$

Thus the units of the x in the table will correspond to $\frac{1}{100}$ th part of the range b . If the standard deviation σ of the curve has been found, then

$$b = \sigma(p + q) \sqrt{\frac{p + q + 1}{pq}} \quad \text{.....(vi)}$$

The value of b will therefore be found by dividing the observed σ by the entry under the corresponding p, q in the fourth column of Table II, where it is headed " σ ." That column gives the ratio of the standard deviation to the range. We do not trouble about y_0 or y_0'' , but simply multiply the entries under the given p and q by N , the total frequency. The frequency on the subrange $sb/100$ to $tb/100$, $t > s$, is given by

$$N \{I_{tb/100}(p, q) - I_{sb/100}(p, q)\}.$$

This is simple enough, if p and q are numbers < 51 actually occurring in Table I, and we wish to find the frequencies occurring on subranges, which are integer multiples of hundredths of the range. But as p and q will have values for which we must interpolate and I will indicate how we may deal with such cases

(b) *Trivariate Everett Formula to Third Differences* (x, p, q).

The formulae for bivariate interpolation on Everett's lines have been provided in *Tracts for Computers* No. III*, but as far as I am aware similar formulae for trivariate interpolation have not hitherto been published. I do not propose to discuss such formulae here, but to provide the most needful one. If we proceed to the terms in δ^2 's, the bivariate mid-panel formula involves four ordinates and eight δ^2 's. The corresponding trivariate formula involves eight ordinates and twenty-four δ^2 's. In both cases the interpolated value is correct to the third difference if the fourth is neglected or supposed negligible.

* Cambridge University Press.

With the bivariate formula twelve tabular values must be used, while for the trivariate thirty-two are required. Hence, while it is relatively easy to use univariate interpolation formulae proceeding up to δ^4 , and to δ^6 , and possible though laborious to use bivariate formulae up to δ^4 terms, it is for practical purposes of small use to provide trivariate formulae going as far as δ^4 . The number of terms to be dealt with becomes unmanageable. The only remedy is to ascertain what will be the extent of error we are introducing by neglecting the δ^4 terms in the part of the table dealt with. For a very considerable proportion of the present table the fourth differences only affect the seventh decimal in the interpolate, and for most statistical purposes five-decimal accuracy is ample. A point may be borne in mind here, namely, that while in a bivariate formula the δ^2 and δ^4 terms are multiplied by the product of three proper fractions and the inverse factorial, in trivariate formulae they are multiplied by the product of four proper fractions as well as the inverse factorial.

The mention of thirty-two entries being required to provide the terms up to δ^2 (actually to third differences) need not alarm the reader unnecessarily. We may remind him that

$$\delta^2 z_0 = z_{-1} + z_{+1} - 2z_0 \quad \text{.....(vii),}$$

and the δ^2 difference can be at once obtained by opening the table, adding the two adjacent values and subtracting twice the value of z_0 . This is done by a continuous operation on the machine. In the case of δ_x^2 and δ_y^2 we may usually have to open at one page only or at most two. In the case of δ_q^2 we may need to turn over several pages for the required values. By aid of (vii) it is possible to replace each δ^2 by three ordinates, and thus up to and including third differences to provide a formula involving only the thirty-two tabular entries. I shall provide such formulae, but after use prefer in some cases the Everett type for our present purposes. In form it is indicative of the contribution of the successive approximations, the coefficients by their symmetry are remarkably simple, they adapt themselves easily to recalculation when we need to vary one position ratio within the same panel or cell of the table, and twenty-four of the thirty-two z -values being second differences give far less machine labour.

The following diagram indicates the notation required for the case of a trivariate Everett formula.

Diagram of values of Z to assist
the geometrical appreciation
of trivariate interpolation.

$Z_{\theta\varphi\chi}$ = interpolate value.

$\theta_1, \theta_0, \varphi_1, \varphi_0$ & χ_1, χ_0 are the argument interval ratios of $Z_{\theta\varphi\chi}$

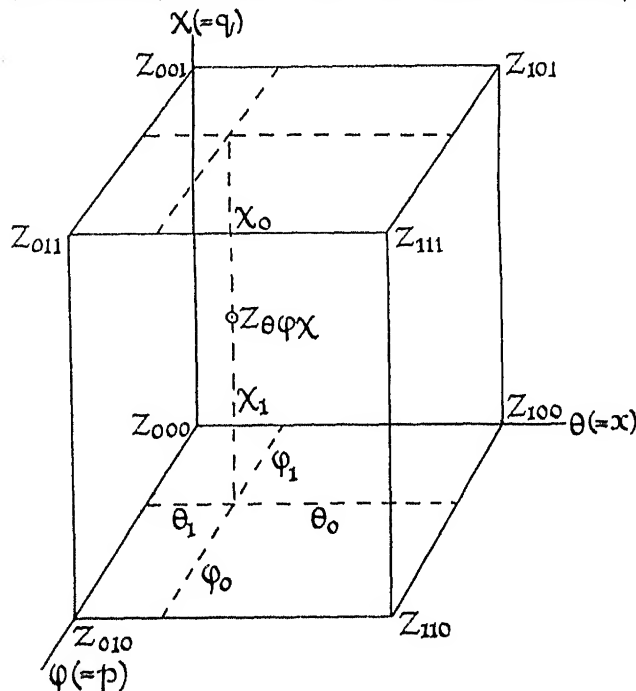


Fig. 1.

Here z_{stu} marks a tabular entry, and for the geometrical appreciation may be termed an "ordinate". θ_1, ϕ_1, χ_1 are the position ratios, or the ratios of the three argument intervals in which the ordinate z_{011} or the interpolate, divides the rectangular six-face. Thus

$$\theta_0 = 1 - \theta_1, \quad \phi_0 = 1 - \phi_1, \quad \chi_0 = 1 - \chi_1.$$

The reader must note that θ_0, ϕ_0 and χ_0 are measured not from the z_{000} corner of the cell but from the z_{111} corner. With this notation the trivariate Everett formula runs thus:

$$\begin{aligned} z_{\theta\phi\chi} = & \theta_0\phi_0\chi_0 z_{000} + \theta_1\phi_0\chi_0 z_{100} + \theta_1\phi_1\chi_0 z_{110} + \theta_0\phi_1\chi_0 z_{010} + \theta_0\phi_0\chi_1 z_{001} + \theta_1\phi_0\chi_1 z_{101} + \theta_1\phi_1\chi_1 z_{111} + \theta_0\phi_1\chi_1 z_{011} \\ & - \frac{1}{6}\theta_1(1+\theta_0)\{\theta_0\phi_0\chi_0\delta_\theta^2 z_{000} + \theta_0\phi_0\chi_1\delta_\theta^2 z_{001} + \theta_0\phi_1\chi_0\delta_\theta^2 z_{010} + \theta_0\phi_1\chi_1\delta_\theta^2 z_{011}\} \\ & - \frac{1}{6}\theta_0(1+\theta_1)\{\theta_1\phi_0\chi_0\delta_\theta^2 z_{100} + \theta_1\phi_0\chi_1\delta_\theta^2 z_{101} + \theta_1\phi_1\chi_0\delta_\theta^2 z_{110} + \theta_1\phi_1\chi_1\delta_\theta^2 z_{111}\} \\ & - \frac{1}{6}\phi_1(1+\phi_0)\{\theta_0\phi_0\chi_0\delta_\phi^2 z_{000} + \theta_0\phi_0\chi_1\delta_\phi^2 z_{001} + \theta_1\phi_0\chi_0\delta_\phi^2 z_{100} + \theta_1\phi_0\chi_1\delta_\phi^2 z_{101}\} \\ & - \frac{1}{6}\phi_0(1+\phi_1)\{\theta_0\phi_1\chi_0\delta_\phi^2 z_{010} + \theta_0\phi_1\chi_1\delta_\phi^2 z_{011} + \theta_1\phi_1\chi_0\delta_\phi^2 z_{110} + \theta_1\phi_1\chi_1\delta_\phi^2 z_{111}\} \\ & - \frac{1}{6}\chi_1(1+\chi_0)\{\theta_0\phi_0\chi_0\delta_\chi^2 z_{000} + \theta_0\phi_1\chi_0\delta_\chi^2 z_{010} + \theta_1\phi_0\chi_0\delta_\chi^2 z_{100} + \theta_1\phi_1\chi_0\delta_\chi^2 z_{110}\} \\ & - \frac{1}{6}\chi_0(1+\chi_1)\{\theta_0\phi_0\chi_1\delta_\chi^2 z_{001} + \theta_0\phi_1\chi_1\delta_\chi^2 z_{011} + \theta_1\phi_0\chi_1\delta_\chi^2 z_{101} + \theta_1\phi_1\chi_1\delta_\chi^2 z_{111}\} \end{aligned} \quad \dots\dots(\text{viii}).$$

When this formula is used in this Introduction, θ will stand for x , ϕ for p and χ for q of the table.

It will be noticed at once that with the above notation whether we are dealing with any z , or any second central difference of any z , the subscripts of z define by their order and values the subscripts of the corresponding argument ratio product $\theta\phi\chi$. When we have to interpolate inversely for x to find θ , then we only change θ .

Illustration 1. Given the frequency curve

$$y = y_0 x^{9.2551} (1-x)^{33.2228},$$

find what proportion of the frequency lies beyond $x = .3914$, i.e. find the chance of an individual being drawn at random with a greater value of x than .3914 of the range. We need the area from $x = .3914$ to $x = 1$. Comparing this with the curve

$$y = y_0 x^{p-1} (1-x)^{q-1},$$

we see that $p = 10.2551$, $q = 34.2228$, or q is greater than p . We must accordingly put $x = 1 - x'$ and write the curve

$$y = y_0 x'^{33.2228} (1-x')^{9.2551},$$

in which q will be less than p , and we must find the relative area from $x' = 0$ to $x' = .6086$.

We have now to find the cell in which our interpolate lies; x' lies between 60 and 61, p between 34 and 35, q between 10 and 10.5, hence pp. 255 and 265 contain the eight z 's we require. They are:

p. 255	p. 265	
$z_{000} = .006,6131,$	$z_{001} = .009,1302$	} \dots\dots(\text{ix})
$z_{100} = .009,4416,$	$z_{101} = .012,8940$	
$z_{110} = .007,1344,$	$z_{111} = .009,8423$	
$z_{010} = .004,9189,$	$z_{011} = .006,8608$	

Each one of these values gives rise to three δ^2 's corresponding to variation of x , p and q . We may illustrate the finding of these adequately on z_{000} , reminding the reader that the values would not actually be taken out of the table, but the δ^2 worked by four turns of the machine handle.

From p. 255: $\delta_x^2 z_{000} = .004,5686 + .009,4416 - 2 \times .006,6131 = .000,7840$.

From p. 255: $\delta_p^2 z_{000} = .008,8437 + .004,9189 - 2 \times .006,6131 = .000,5384$.

From pp. 245, 255 and 265: $\delta_q^2 z_{000} = .004,6957 + .009,1302 - 2 \times .006,6131 = .000,5997$.

In the same manner we find:

$\delta_x^2 z_{100} = .001,0276,$	$\delta_p^2 z_{100} = .000,6834,$	$\delta_q^2 z_{100} = .000,7889$	} \dots\dots(\text{x})
$\delta_x^2 z_{110} = .000,8545,$	$\delta_p^2 z_{110} = .000,5379,$	$\delta_q^2 z_{110} = .000,6428$	
$\delta_x^2 z_{010} = .000,6405,$	$\delta_p^2 z_{010} = .000,4163,$	$\delta_q^2 z_{010} = .000,4797$	
$\delta_x^2 z_{001} = .001,0091,$	$\delta_p^2 z_{001} = .000,6869,$	$\delta_q^2 z_{001} = .000,7260$	
$\delta_x^2 z_{101} = .001,3016,$	$\delta_p^2 z_{101} = .000,8584,$	$\delta_q^2 z_{101} = .000,9395$	
$\delta_x^2 z_{111} = .001,0974,$	$\delta_p^2 z_{111} = .000,6850,$	$\delta_q^2 z_{111} = .000,7766$	
$\delta_x^2 z_{011} = .000,8353,$	$\delta_p^2 z_{011} = .000,5382,$	$\delta_q^2 z_{011} = .000,5888$	

Turning to the argument interval ratios we have:

$$\theta_1 = .86 \text{ (since } x = .6086), \theta_0 = .14, \frac{1}{6}\theta_1(1+\theta_0) = .1634,0000, \frac{1}{6}\theta_0(1+\theta_1) = .0434,0000;$$

$$\phi_1 = .2228, \phi_0 = .7772, \frac{1}{6}\phi_1(1+\phi_0) = .0659,9336, \frac{1}{6}\phi_0(1+\phi_1) = .1583,9336;$$

$$\chi_1 = \frac{.2551}{.5} \text{ (since the interval for } q = .5) = .5102, \chi_0 = .4898, \frac{1}{6}\chi_1(1+\chi_0) = .1266,8266, \frac{1}{6}\chi_0(1+\chi_1) = .1232,8266.$$

We will now write down our argument ratio products in a form useful for a later purpose:

Corresponding to	θ	$\phi\chi$	
z_{000}	$\theta_0\phi_0\chi_0 = .14 \times .3806,7256 = .0532,9416$		}(xi).
z_{100}	$\theta_1\phi_0\chi_0 = .86 \times \quad \quad \quad = .3273,7840$		
z_{110}	$\theta_1\phi_1\chi_0 = .86 \times .1091,2744 = .0938,4960$		
z_{010}	$\theta_0\phi_1\chi_0 = .14 \times \quad \quad \quad = .0152,7784$		
z_{001}	$\theta_0\phi_0\chi_1 = .14 \times .3965,2744 = .0555,1384$		
z_{101}	$\theta_1\phi_0\chi_1 = .86 \times \quad \quad \quad = .3410,1360$		
z_{111}	$\theta_1\phi_1\chi_1 = .86 \times .1136,7256 = .0977,5840$		
z_{011}	$\theta_0\phi_1\chi_1 = .14 \times \quad \quad \quad = .0159,1416$		

Multiplying the z 's by the corresponding $\theta\phi\chi$ products as a continuous operation on the machine we find

$$\text{Sum of hyperbolic* terms} = .0101,6336.$$

For the δ^2 terms we have

$$\begin{aligned} \text{Total } \delta^2 \text{ terms} &= .1634,0000 \times .0001,2088 + .0434,0000 \times .0009,6759 \\ &\quad + .0659,9336 \times .0005,8329 + .1583,9336 \times .0001,2665 \\ &\quad + .1266,8266 \times .0003,5788 + .1232,8266 \times .0004,4597 \\ &= .0002,2062, \end{aligned}$$

each individual δ^2 series and the final sum of products being obtained by continuous operations on the machine.

$$\begin{aligned} \text{Hence the required area} &= .0101,6336 - .0002,2062 \\ &= .0099,4274. \end{aligned}$$

This is the chance that an individual should be drawn with a variate exceeding .3914.

Illustration 2. Given the same frequency curve as in *Illustration 1*, find the value of x for which the relative area is exactly .01.

The former illustration shows that we are not far from the required value of x . Let us vary θ_1 from .86 to .88. Thus $\theta_0 = .12$ and

$$\frac{1}{6}\theta_1(1+\theta_0) = .1642,6667, \quad \frac{1}{6}\theta_0(1+\theta_1) = .0376,0000.$$

The values of the z 's in (ix) and of the $\delta^2 z$ in (x) remain unchanged, as well as the ϕ and χ coefficients. The form in which we have exhibited the argument ratio products in (xi) enables us to ascertain rapidly the new products. They are:

Corresponding to	$\theta\phi\chi$	
$z_{000} = .006,6131$	$\theta_0\phi_0\chi_0 = .0456,8071$	}(xii).
$z_{100} = .009,4416$	$\theta_1\phi_0\chi_0 = .3349,9185$	
$z_{110} = .007,1344$	$\theta_1\phi_1\chi_0 = .0960,3215$	
$z_{010} = .004,9189$	$\theta_0\phi_1\chi_0 = .0130,9529$	
$z_{001} = .009,1302$	$\theta_0\phi_0\chi_1 = .0475,8329$	
$z_{101} = .012,8940$	$\theta_1\phi_0\chi_1 = .3489,4415$	
$z_{111} = .009,8423$	$\theta_1\phi_1\chi_1 = .1000,3185$	
$z_{011} = .006,8608$	$\theta_0\phi_1\chi_1 = .0136,4071$	

$$\text{Hyperbolic terms} = S(z_{stu}\theta_s\phi_t\chi_u) = .0102,2636.$$

$$\text{Sum } \delta^2 \text{ terms} = .0002,1392.$$

$$\text{Total area} = .0100,1244.$$

* This term is used here, as in *Biometrika*, Vol. xix, p. 356, to denote the part of the interpolation involving only the double or triple products of the interval ratios.

If we suppose linear interpolation adequate between $\theta_1 = .86$ and $.88$, i.e. between $x' = .6086$ and $x' = .6088$, we have

$$\text{Area} = .01 \text{ when } x' = .608,7643.$$

Thus we see that the required value of θ_1 lies between $.876$ and $.877$. If we require greater accuracy is best to work these out. We find

$$\begin{aligned} \theta_1 = .876: \frac{1}{6}\theta_1(1+\theta_0) &= .1641,0400, \quad \frac{1}{6}\theta_0(1+\theta_1) = .0387,7067, \\ \theta_1 = .877: \frac{1}{6}\theta_1(1+\theta_0) &= .1641,4517, \quad \frac{1}{6}\theta_0(1+\theta_1) = .0384,7850, \end{aligned}$$

and the corresponding triple products are:

$\theta_1 = .876$	$\theta_1 = .877$	
$\theta_0\phi_0\chi_0 = .0472,0340,$	$.0468,2272,$	}
$\theta_1\phi_0\chi_0 = .3334,6916,$	$.3338,4984,$	
$\theta_1\phi_1\chi_0 = .0955,9564,$	$.0957,0476,$	
$\theta_0\phi_1\chi_0 = .0135,3180,$	$.0134,2208,$	
$\theta_0\phi_0\chi_1 = .0491,6940,$	$.0487,7287,$	
$\theta_1\phi_0\chi_1 = .3473,5804,$	$.3477,5457,$	
$\theta_1\phi_1\chi_1 = .0995,7716,$	$.0996,9084,$	
$\theta_0\phi_1\chi_1 = .0140,9540,$	$.0139,8172,$	

.....(xi)

These give:

Hyperbolic term:	.0102,1376,	.0102,1694,
δ^2 terms:	-2,1615,	-2,1581,
Total relative area:	.0099,9761,	.0100,0113.

θ_1 by linear interpolation* = $.876,679$, or, the relative area = $.01$ when $x' = .608,7668$.

Thus finally the area beyond $x = .391,2332$ equals $.01$, where, without taking into account the differences, we certainly cannot retain more than six figures in x .

It is of course possible to look upon formula (viii) as a cubic equation to find θ_1 or θ_0 whichever is smaller—and solve it by approximation, or even directly. The cubic equation is the following:

$$\begin{aligned} & \frac{1}{6} [\phi_0\chi_0(\delta_\theta^2 z_{000} - \delta_\theta^2 z_{100}) + \phi_0\chi_1(\delta_\theta^2 z_{001} - \delta_\theta^2 z_{101}) + \phi_1\chi_0(\delta_\theta^2 z_{010} - \delta_\theta^2 z_{110}) + \phi_1\chi_1(\delta_\theta^2 z_{011} - \delta_\theta^2 z_{111})] \theta_0^3 \\ & + \frac{1}{2} [\phi_0\chi_0\delta_\theta^2 z_{100} + \phi_0\chi_1\delta_\theta^2 z_{101} + \phi_1\chi_0\delta_\theta^2 z_{110} + \phi_1\chi_1\delta_\theta^2 z_{111}] \theta_0^2 \\ & + [\phi_0\chi_0(z_{000} - z_{100}) + \phi_0\chi_1(z_{001} - z_{101}) + \phi_1\chi_0(z_{010} - z_{110}) + \phi_1\chi_1(z_{011} - z_{111}) \\ & - \frac{1}{6} \{ \phi_0\chi_0(\delta_\theta^2 z_{000} + 2\delta_\theta^2 z_{100}) + \phi_0\chi_1(\delta_\theta^2 z_{001} + 2\delta_\theta^2 z_{101}) + \phi_1\chi_0(\delta_\theta^2 z_{010} + 2\delta_\theta^2 z_{110}) + \phi_1\chi_1(\delta_\theta^2 z_{011} + 2\delta_\theta^2 z_{111}) \\ & - \frac{1}{6} \phi_1(1+\phi_0) \{ \phi_0\chi_0(\delta_\phi^2 z_{000} - \delta_\phi^2 z_{100}) + \phi_0\chi_1(\delta_\phi^2 z_{001} - \delta_\phi^2 z_{101}) \} \\ & - \frac{1}{6} \phi_0(1+\phi_1) \{ \phi_1\chi_0(\delta_\phi^2 z_{010} - \delta_\phi^2 z_{110}) + \phi_1\chi_1(\delta_\phi^2 z_{011} - \delta_\phi^2 z_{111}) \} \\ & - \frac{1}{6} \chi_1(1+\chi_0) \{ \phi_0\chi_0(\delta_\chi^2 z_{000} - \delta_\chi^2 z_{100}) + \phi_1\chi_0(\delta_\chi^2 z_{010} - \delta_\chi^2 z_{110}) \} \\ & - \frac{1}{6} \chi_0(1+\chi_1) \{ \phi_0\chi_1(\delta_\chi^2 z_{001} - \delta_\chi^2 z_{101}) + \phi_1\chi_1(\delta_\chi^2 z_{011} - \delta_\chi^2 z_{111}) \}] \theta_0 \\ & - [z_{\theta\phi\chi} - \phi_0\chi_0 z_{100} - \phi_0\chi_1 z_{101} - \phi_1\chi_0 z_{110} - \phi_1\chi_1 z_{111} \\ & + \frac{1}{6} \phi_1(1+\phi_0) (\phi_0\chi_0\delta_\phi^2 z_{100} + \phi_0\chi_1\delta_\phi^2 z_{101}) + \frac{1}{6} \phi_0(1+\phi_1) (\phi_1\chi_0\delta_\phi^2 z_{110} + \phi_1\chi_1\delta_\phi^2 z_{111}) \\ & + \frac{1}{6} \chi_1(1+\chi_0) (\phi_0\chi_0\delta_\chi^2 z_{100} + \phi_1\chi_0\delta_\chi^2 z_{110}) + \frac{1}{6} \chi_0(1+\chi_1) (\phi_0\chi_1\delta_\chi^2 z_{101} + \phi_1\chi_1\delta_\chi^2 z_{111})] = 0 \end{aligned}$$

.....(xii)

The equation is long and troublesome but it may be worth while seeing to what value of θ_0 it leads in the inverse interpolation of the previous example.

* As evidence that we may with our formula linearly interpolate for θ , we remark that:

$$\begin{aligned} x = .608700, \quad \text{Area} &= .0099,7687 \\ x = .608720, \quad \text{Area} &= .0099,8377 \end{aligned} \quad \left. \vphantom{\begin{aligned} x = .608700, \quad \text{Area} &= .0099,7687 \\ x = .608720, \quad \text{Area} &= .0099,8377 \end{aligned}} \right\} \text{ or difference in area for } .000010 \text{ in } x = .0000,0355,$$

and

$$\begin{aligned} x = .608760, \quad \text{Area} &= .0099,9761 \\ x = .608770, \quad \text{Area} &= .0100,013 \end{aligned} \quad \left. \vphantom{\begin{aligned} x = .608760, \quad \text{Area} &= .0099,9761 \\ x = .608770, \quad \text{Area} &= .0100,013 \end{aligned}} \right\} \text{ or difference in area for } .000010 \text{ in } x = .0000,0352.$$

Thus there is almost the same difference at $x = .608710$ as at $x = .608760$.

We repeat the values from (xi) for the four argument ratios:

$$\begin{aligned}\phi_0\chi_0 &= \cdot 3806,7256, & \text{further: } \frac{1}{6}\phi_1(1+\phi_0) &= \cdot 0659,9336, \\ \phi_0\chi_1 &= \cdot 3965,2744, & \frac{1}{6}\phi_0(1+\phi_1) &= \cdot 1583,9336, \\ \phi_1\chi_0 &= \cdot 1091,2744, & \frac{1}{6}\chi_1(1+\chi_0) &= \cdot 1266,8266, \\ \phi_1\chi_1 &= \cdot 1136,7256, & \frac{1}{6}\chi_0(1+\chi_1) &= \cdot 1232,8266.\end{aligned}$$

We will now proceed to the evaluation of the terms of the cubic one by one.

Coefficient of θ_0^3

$$\begin{aligned}&= \frac{1}{6} \left[\begin{array}{cccc} \cdot 3806,7256 & \cdot 3965,2744 & \cdot 1091,2744 & \cdot 1136,7256 \\ \times -\cdot 000,2436 & \times -\cdot 000,2925 & \times -\cdot 000,2140 & \times -\cdot 000,2621 \end{array} \right] \\ &= -\cdot 0000,4364,4.\end{aligned}$$

Coefficient of θ_0^2

$$\begin{aligned}&= \frac{1}{2} \left[\begin{array}{cccc} \cdot 3806,7256 & \cdot 3965,2744 & \cdot 1091,2744 & \cdot 1136,7256 \\ \times \cdot 001,0276 & \times \cdot 001,3016 & \times \cdot 000,8545 & \times \cdot 001,0974 \end{array} \right] \\ &= +\cdot 0005,6264,6.\end{aligned}$$

Coefficient of θ_0

$$\begin{aligned}\text{First Line} &= \left[\begin{array}{cccc} \cdot 3806,7256 & \cdot 3965,2744 & \cdot 1091,2744 & \cdot 1136,7256 \\ \times -\cdot 002,8285 & \times -\cdot 003,7638 & \times -\cdot 002,2155 & \times -\cdot 002,9815 \end{array} \right] \\ &= -\cdot 0031,4986,9.\end{aligned}$$

$$\begin{aligned}\text{Second Line} &= -\frac{1}{6} \left[\begin{array}{cccc} \cdot 3806,7256 & \cdot 3965,2744 & \cdot 1091,2744 & \cdot 1136,7256 \\ \times \cdot 002,8392 & \times \cdot 003,6123 & \times \cdot 002,3495 & \times \cdot 003,0301 \end{array} \right] \\ &= -\cdot 0005,1900,3.\end{aligned}$$

$$\begin{aligned}\text{Third and Fourth Lines} &= - \left[\cdot 0659,9336 \left(\begin{array}{cc} \cdot 3806,7256 & \cdot 3965,2744 \\ \times -\cdot 000,1450 & \times -\cdot 000,1715 \end{array} \right) \right. \\ &\quad \left. + \cdot 1583,9336 \left(\begin{array}{cc} \cdot 1091,2744 & \cdot 1136,7256 \\ \times -\cdot 000,1216 & \times -\cdot 000,1468 \end{array} \right) \right] \\ &= +\cdot 0000,1287,6.\end{aligned}$$

$$\begin{aligned}\text{Fifth and Sixth Lines} &= - \left[\cdot 1266,8266 \left(\begin{array}{cc} \cdot 3806,7256 & \cdot 1091,2744 \\ \times -\cdot 000,1892 & \times -\cdot 000,1631 \end{array} \right) \right. \\ &\quad \left. + \cdot 1232,8266 \left(\begin{array}{cc} \cdot 3965,2744 & \cdot 1136,7256 \\ \times -\cdot 000,2135 & \times -\cdot 000,1878 \end{array} \right) \right] \\ &= +\cdot 0000,2444,8.\end{aligned}$$

Hence total coefficient of $\theta_0 = -\cdot 0036,3154,8$.

Constant Term

$$\begin{aligned}&= - \left[\cdot 01 - \left(\begin{array}{cccc} \cdot 3806,7256 & \cdot 3965,2744 & \cdot 1091,2744 & \cdot 1136,7256 \\ \times \cdot 009,4416 & \times \cdot 012,8940 & \times \cdot 007,1344 & \times \cdot 009,8423 \end{array} \right) \right. \\ &\quad + \cdot 0659,9336 \left(\begin{array}{cc} \cdot 3806,7256 & \cdot 3965,2744 \\ \times \cdot 000,6834 & \times \cdot 000,8584 \end{array} \right) + \cdot 1583,9336 \left(\begin{array}{cc} \cdot 1091,2744 & \cdot 1136,7256 \\ \times \cdot 000,5379 & \times \cdot 000,6850 \end{array} \right) \\ &\quad \left. + \cdot 1266,8266 \left(\begin{array}{cc} \cdot 3806,7256 & \cdot 1091,2744 \\ \times \cdot 000,7889 & \times \cdot 000,6428 \end{array} \right) + \cdot 1232,8266 \left(\begin{array}{cc} \cdot 3965,2744 & \cdot 1136,7256 \\ \times \cdot 000,9395 & \times \cdot 000,7766 \end{array} \right) \right] \\ &= +\cdot 0004,3933,7.\end{aligned}$$

The computing of the terms is not so long as may appear to the reader, and is done by continuous process on the machine. A skilled computer would not write down the individual terms as above. Here they are printed so that the reader can appreciate the amount of labour requisite. The cubic for θ_0 is

$$F(\theta_0) = 4,3644\theta_0^3 - 56,2646\theta_0^2 + 363,1548\theta_0 - 43,9337 = 0,$$

$$F'(\theta_0) = 13,0932\theta_0^2 - 112,5292\theta_0 + 363,1548.$$

Put $\theta_0 = .10$,

$$F(\theta_0) = -81,765.02.$$

Put $\theta_0 = .15$,

$$F(\theta_0) = +92,882.96.$$

Linear interpolation gives $\theta_0 = .1234$ approximately for the vanishing of $F(\theta_0)$.

Put $\theta_0 = .1234$,

$$F(\theta_0) = +310.31, \quad F'(\theta_0) = 349,4680.74.$$

Hence

$$\epsilon = -F(\theta_0)/F'(\theta_0) = -.0000,8879,5$$

or we have

$$\theta_0 = .123,311.$$

Thus $x = .391,2331$ for area = .01.

In our previous investigation the value found was $x = .391,2332$, a quite sufficient accordance.

It is easy to solve the cubic, but personally I find it less labour to approximate to the proper values θ_1 and θ_0 from the general equation (viii).

(III) SPECIAL CASE OF $I_x(i + 0.5, i' + 0.5)$ OF IMPORTANCE FOR SMALL SAMPLES

In the problem of sampling we frequently have to deal with the p and q of $I_x(p, q)$ in the form $i + 0.5$ where i is an integer; accordingly it is desirable to provide special formulae for such cases. If only one other of p and q be of this form, while the other is an integer, then, if the values fall within the range of our table, and the values of p or q exceed 10 and 10.5 we need a univariate formula to determine $I_x(i, i' + 0.5)$.

(a) *Univariate Interpolation Formulae for $I_x(i, i' + 0.5)$.*

The formulae available for the special case of $\theta = \phi = \frac{1}{2}$ are*:

(a) *Mid-panel Formulae.*

$$z_{\frac{1}{2}} = \frac{1}{2}(z_0 + z_1) - \frac{1}{16}(\delta^2 z_0 + \delta^2 z_1) + \frac{3}{256}(\delta^4 z_0 + \delta^4 z_1) - \frac{5}{2648}(\delta^6 z_0 + \delta^6 z_1) + \frac{35}{65536}(\delta^8 z_0 + \delta^8 z_1) \dots \dots (xv)$$

up to and including the ninth order difference. The δ^8 terms after $p, q > 10$ contribute nothing to the interpolation up to seven-figure accuracy. This formula may also be written in the form

$$z_{\frac{1}{2}} = \frac{1}{2}(z_0 + z_1) - \frac{81}{1024}(\delta^2 z_0 + \delta^2 z_1) + \frac{39}{2048}(\delta^2 z_{-1} + \delta^2 z_2) - \frac{5}{2048}(\delta^2 z_{-2} + \delta^2 z_3) \dots \dots (xv) \text{ bis.}$$

This is correct up to and including seventh order differences, which, as I have just indicated, is the order of differences to which it may be profitable to work with our seven-figure table.

Lastly we may replace the δ^2 , and obtain a formula involving only the tabular entries. It is

$$z_{\frac{1}{2}} = \frac{1}{2048}\{1225(z_0 + z_1) - 245(z_{-1} + z_2) + 49(z_{-2} + z_3) - 5(z_{-3} + z_4)\} \dots \dots (xv) \text{ ter.}$$

This is correct up to and including seventh order differences.

The objection to (xv) bis and (xv) ter is that if we desire to abbreviate our work by omitting some of the z 's or $\delta^2 z$'s, we have no means of doing so unless we have first calculated the differences, or their values in terms of the $\delta^2 z$'s or z 's†.

(b) *Mid-point Formulae.*

The fundamental formula of this type is

$$z_{\frac{1}{2}} = z_0 + \frac{1}{4}(z_1 - z_{-1}) - \frac{1}{32}(\delta^2 z_1 - \delta^2 z_{-1}) + \frac{1}{8}\delta^2 z_0 + \frac{3}{512}(\delta^4 z_1 - \delta^4 z_{-1}) - \frac{1}{128}\delta^4 z_0 - \frac{5}{4096}(\delta^6 z_1 - \delta^6 z_{-1}) + \frac{1}{1624}\delta^6 z_0 \dots (xvi)$$

which includes terms of the seventh order difference.

To the same order we may express the result in terms of second differences only, i.e.

$$z_{\frac{1}{2}} = z_0 + \frac{1}{4}(z_1 - z_{-1}) - \frac{5}{4096}(\delta^2 z_3 - \delta^2 z_{-3}) + \frac{1}{512}(6\delta^2 z_2 - 5\delta^2 z_{-2}) - \frac{1}{4096}(249\delta^2 z_1 - 153\delta^2 z_{-1}) + \frac{75}{512}\delta^2 z_0 \dots (xvi) \text{ bis}$$

where the order of terms indicates nothing as to the order of convergency.

* See *Tracts for Computers*, No. II, p. 14.

† Of course formula (xv) ter may be written in the form

$z_{\frac{1}{2}} = \frac{1}{2}(z_0 + z_1) - \frac{1}{128}\{z_{-1} + z_2 - z_0 - z_1\} + \frac{3}{2048}\{z_{-2} + z_3 - 3(z_{-1} + z_2) + 2(z_0 + z_1)\} - \frac{5}{2648}\{z_{-3} + z_4 - 5(z_{-2} + z_3) + 9(z_{-1} + z_2) - 5(z_0 + z_1)\}$ where the terms in curled brackets are successively of the order δ^2 , δ^4 and δ^6 , thus we can follow the order of convergency. But in this form the formula has lost the easy mode of computing peculiar to (xv) ter.

Lastly, expressing the formula in terms of ordinates or table entries only we have

$$z_4' = \frac{1}{4096} (5z_{-4} - 50z_{-3} + 238z_{-2} - 770z_{-1} + 2800z_0 + 2170z_1 - 350z_2 + 58z_3 - 5z_4) \dots\dots(xvi) \text{ ter.}$$

Undoubtedly (xv) *ter* and (xvi) *ter* are the easiest formulae to apply, for the whole process is one continuous operation on the machine, and we need write down nothing on paper, taking the values direct from table to machine. Going to seventh differences they provide all that our seven-figure table is capable of. At the same time we may be indirectly working differences which are in reality negligible*.

Illustration 3. I will illustrate the applicability of these interpolation formulae to our table by calculating $I_{.19}(10.5, 10)$ from integer values of p and q in the table. The values for which we need to consult the table are $I_{.19}(6, 10)$ to $I_{.19}(15, 10)$, and although it is unnecessary to write them down in the case of formulae (xv) *ter* and (xvi) *ter*, I am doing so here to compare the various methods of ascertaining $I_{.19}(10.5, 10)$. We have

		z	δ^2	δ^4	δ^6	δ^8
z_{-4}	$I_{.19}(6, 10)$	490,286				
z_{-3}	$I_{.19}(7, 10)$	204,016	161,947			
z_{-2}	$I_{.19}(8, 10)$	79,693	74,128	44,811		
z_{-1}	$I_{.19}(9, 10)$	29,498	31,120	24,078	7,901	
z_0	$I_{.19}(10, 10)$	10,423	12,190	11,246	6,352	-1,222
\rightarrow						
z_1	$I_{.19}(11, 10)$	3,538	4,506	4,766	3,581	+910
z_2	$I_{.19}(12, 10)$	1,159	1,588	1,867	1,720	
z_3	$I_{.19}(13, 10)$	368	537	688		
z_4	$I_{.19}(14, 10)$	114	174			
z_5	$I_{.19}(15, 10)$	34				

Applying first the mid-panel formula (xv) we have

$$\begin{aligned} z_4' &= \frac{1}{2}(13961) - \frac{1}{16}(16696) + \frac{3}{256}(16012) - \frac{5}{2048}(9933) + \frac{35}{65536}(-312) \\ &= 6980|5 - 1043|5 + 187|64 - 24|25 - 0|17 \\ &= 6100|22, \end{aligned}$$

or introducing the proper number of zeros, omitted for brevity above,

$$z_4 = I_{.19}(10.5, 10) = .000,6100.$$

This differs by a unit in the seventh figure from the value .000,6101 in the table itself. It is as good as we can expect with only seven figures recorded.

Next working with formula (xv) *bis*, which does not regard δ^8 , we have

$$z_4 = 6980|5 - 1320|67 + 622|86 - 182|29 = 6100|40,$$

or with the zeros reinstated

$$z_4 = .000,6100|40,$$

in complete accord with (xv), if we remember that the $-0|17$ has not been introduced.

Lastly, the easy formula (xv) *ter* gives us

$$\begin{aligned} z_4 &= \frac{1}{2048} (-5 \times 20430 + 49 \times 80061 - 245 \times 30657 + 1225 \times 13961) \\ &= \frac{1}{2048} (-1,020,650 + 3,922,989 - 7,510,965 + 17,102,225) \\ &= \frac{1}{2048} (1249,3599) = .000,6100|2, \end{aligned}$$

again in complete agreement, as of course it should be. Needless perhaps to repeat that with this last formula nothing but the answer needs to be written down.

* The Lagrangian which does not regard the values z_{-4} and z_4 is

$$z_4 = \frac{1}{1024} (-5z_{-3} + 42z_{-2} - 175z_{-1} + 700z_0 + 525z_1 - 70z_2 + 7z_3) \dots\dots(xvi) \text{ quater.}$$

If (xvi) *ter* and (xvi) *quater* give sensibly the same result, then seventh differences were unnecessary, and we have thus computed terms which were not required.

We now turn to the mid-point formulae also carried to the seventh difference. First, (xvi) gives us

$$\begin{aligned} z_{\frac{1}{2}} &= 10423 - 6490 + 831|7 + 1523|7 - 113|2 - 87|9 + 5|3 + 6|2 \\ &= 6098|8, \text{ or fully } \cdot 000,6098|8. \end{aligned}$$

Proceeding in the same way with (xvi) *bis*, it gives us

$$\begin{aligned} z_{\frac{1}{2}} &= 10423 - 6490 + 197|0 + 18|6 - 723|9 - 273|9 + 1162|4 + 1785|4 \\ &= \cdot 000,6098|8 \end{aligned}$$

as before, as indeed it should. The advantage of (xvi) *bis* lying in the fact that it does not require the discovery of δ^4 and δ^6 .

Next dealing with (xvi) *ter*, the formula of this group most easy to apply, we find

$$\begin{aligned} z_{\frac{1}{2}} &= \frac{1}{4096} \{2,451,430 - 10,200,800 + 18,066,934 - 22,713,460 \\ &\quad + 29,184,400 + 7,677,460 - 405,650 + 21,344 - 570\} \\ &= \cdot 000,6098|9, \text{ as before.} \end{aligned}$$

Comparing this value with that obtainable from (xvi) *quater* in the footnote to p. xv, namely $\cdot 000,6098$ we see that it is not possible to neglect seventh differences.

Further, comparing the results of the mid-panel formulae with those for the mid-point formulae, we see that the former are one unit in error in the seventh decimal place while the latter are two units off. This is in accordance with the rule that mid-panel formulae give the better result when the interpolant lies in the region from $\frac{1}{4}$ to $\frac{3}{4}$ of the argument, and mid-point formulae in the region $-\frac{1}{4}$ to $+\frac{1}{4}$ round the point. The formula (xv) *ter* gives a good $\cdot 5$ interpolate, even at the part of the table where we cease to give arguments ascending by 0.5 , and there is little doubt that through the remainder of the table values will do so likewise.

(β) Bivariate Formulae for $I_x(i + 0.5, i' + 0.5)$.

We now turn to cases in which both p and q are of the form $i + 0.5$, so that we need bivariate interpolation formulae. The difficulty arising here is that if we go beyond the terms in δ^4, δ'^4 and $\delta^2\delta'^2$ —i.e. beyond the fifth order differences—we have no less than sixteen further terms to take into consideration in order to go to sixth and seventh order differences. Our illustration from the univariate case suggests that it is needful to use these differences, if we require the interpolate to be as accurate as the interpolants. The formula applies of course only to the part of the table where we were applying our formulae. Further, a bivariate formula deals with more “near points” than a univariate formula can do, and accordingly may give a better result with fewer high order differences. It is of interest to see how correctly the bivariate formulae give $I_x(i + 0.5, i' + 0.5)$, for not only are such values of themselves often needed, but we shall there test the accuracy with which we can apply bivariate formulae up to δ^4, δ'^4 in the part of the table under consideration. As before we have three types of formulae to deal with, each of which may be expressed in a different way.

(a) Mid-panel Formulae.

The general mid-panel Everett formula is given on p. 9 of *Tracts for Computers*, No. III*. In the present case of $\theta = \phi = \chi = \frac{1}{2}$, it becomes

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} &= \frac{1}{4}(z_{0,0} + z_{0,1} + z_{1,0} + z_{1,1}) - \frac{1}{32}(\delta^2 z_{0,0} + \delta^2 z_{0,1} + \delta^2 z_{1,0} + \delta^2 z_{1,1}) \\ &\quad - \frac{1}{32}(\delta'^2 z_{0,0} + \delta'^2 z_{0,1} + \delta'^2 z_{1,0} + \delta'^2 z_{1,1}) + \frac{3}{512}(\delta^4 z_{0,0} + \delta^4 z_{0,1} + \delta^4 z_{1,0} + \delta^4 z_{1,1}) \\ &\quad + \frac{3}{512}(\delta'^4 z_{0,0} + \delta'^4 z_{0,1} + \delta'^4 z_{1,0} + \delta'^4 z_{1,1}) + \frac{1}{256}(\delta^2 \delta'^2 z_{0,0} + \delta^2 \delta'^2 z_{0,1} + \delta^2 \delta'^2 z_{1,0} + \delta^2 \delta'^2 z_{1,1}) \\ &\quad - \frac{3}{4096}(\delta^4 \delta'^2 z_{0,0} + \delta^4 \delta'^2 z_{0,1} + \delta^4 \delta'^2 z_{1,0} + \delta^4 \delta'^2 z_{1,1}) - \frac{3}{4096}(\delta'^2 \delta^4 z_{0,0} + \delta'^2 \delta^4 z_{0,1} + \delta'^2 \delta^4 z_{1,0} + \delta'^2 \delta^4 z_{1,1}) \\ &\quad - \frac{5}{4096}(\delta^6 z_{0,0} + \delta^6 z_{0,1} + \delta^6 z_{1,0} + \delta^6 z_{1,1}) - \frac{5}{4096}(\delta'^6 z_{0,0} + \delta'^6 z_{0,1} + \delta'^6 z_{1,0} + \delta'^6 z_{1,1}) \end{aligned} \quad \dots\dots (xvii).$$

up to and including terms of the seventh order differences.

Taking differences only to the fifth order, we have in terms solely of second differences

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = & \frac{1}{4}(z_{0,0} + z_{0,1} + z_{1,1} + z_{1,0}) - \frac{5}{128}(\delta^2 z_{0,0} + \delta^2 z_{0,1} + \delta^2 z_{1,0} + \delta^2 z_{1,1}) \\ & - \frac{5}{128}(\delta'^2 z_{0,0} + \delta'^2 z_{0,1} + \delta'^2 z_{1,0} + \delta'^2 z_{1,1}) + \frac{3}{512}(\delta^2 z_{-1,0} + \delta^2 z_{-1,1} + \delta^2 z_{2,0} + \delta^2 z_{2,1}) \\ & + \frac{3}{512}(\delta'^2 z_{0,-1} + \delta'^2 z_{1,-1} + \delta'^2 z_{0,2} + \delta'^2 z_{1,2}) + \frac{1}{512}(\delta^2 z_{0,-1} + \delta^2 z_{1,-1} + \delta^2 z_{0,2} + \delta^2 z_{1,2}) \\ & + \frac{1}{512}(\delta'^2 z_{-1,0} + \delta'^2 z_{-1,1} + \delta'^2 z_{2,0} + \delta'^2 z_{2,1}) \end{aligned} \quad \dots\dots(xvii) \text{ bis.}$$

If we include differences up to the seventh order we have

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = & \frac{1}{4}(z_{0,0} + z_{0,1} + z_{1,1} + z_{1,0}) - \frac{173}{4096}(\delta^2 z_{0,0} + \delta^2 z_{0,1} + \delta^2 z_{1,0} + \delta^2 z_{1,1}) \\ & - \frac{173}{4096}(\delta'^2 z_{0,0} + \delta'^2 z_{0,1} + \delta'^2 z_{1,0} + \delta'^2 z_{1,1}) + \frac{42}{4096} * (\delta^2 z_{-1,0} + \delta^2 z_{-1,1} + \delta^2 z_{2,0} + \delta^2 z_{2,1}) \\ & + \frac{42}{4096} * (\delta'^2 z_{0,-1} + \delta'^2 z_{1,-1} + \delta'^2 z_{0,2} + \delta'^2 z_{1,2}) + \frac{11}{4096}(\delta^2 z_{0,-1} + \delta^2 z_{1,-1} + \delta^2 z_{0,2} + \delta^2 z_{1,2}) \\ & + \frac{11}{4096}(\delta'^2 z_{-1,0} + \delta'^2 z_{-1,1} + \delta'^2 z_{2,0} + \delta'^2 z_{2,1}) - \frac{3}{4096}(\delta^2 z_{-1,-1} + \delta^2 z_{-1,2} + \delta^2 z_{2,-1} + \delta^2 z_{2,2}) \\ & - \frac{3}{4096}(\delta'^2 z_{-1,-1} + \delta'^2 z_{-1,2} + \delta'^2 z_{2,-1} + \delta'^2 z_{2,2}) - \frac{5}{4096}(\delta^2 z_{-2,0} + \delta^2 z_{-2,1} + \delta^2 z_{3,0} + \delta^2 z_{3,1}) \\ & - \frac{5}{4096}(\delta'^2 z_{-2,0} + \delta'^2 z_{-2,1} + \delta'^2 z_{3,0} + \delta'^2 z_{3,1}) \end{aligned} \quad \dots\dots(xvii) \text{ ter.}$$

While (xvii) *bis* demands only the second differences at the angles of the square and inner octagon (see Fig. 2, p. xix), (xvii) *ter* demands both δ^2 and δ'^2 at the mid-points of the sides of the outer octagon, the δ^2 's at the top and bottom angles, and the δ'^2 's at the lateral angles, or 16 additional second differences beyond the 24 required in going to the fifth order difference in (xvii). The labour is not insuperable, but if (xvii) *bis* is adequate, we certainly do not desire to go further.

(b) Mid-point Formulae.

The general mid-point formula is given on p. 29 in *Tracts for Computers*, No. III. In the case of $\theta = \phi = \chi = \psi = \frac{1}{2}$, it becomes

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = & z_{0,0} + \frac{1}{4}(z_{0,1} - z_{0,-1} + z_{1,0} - z_{-1,0}) + \frac{1}{16}(z_{1,1} - z_{1,-1} + z_{-1,1} - z_{-1,-1}) \\ & + \frac{7}{64}(\delta^2 z_{0,0} + \delta'^2 z_{0,0}) + \frac{1}{128}(\delta^2 z_{0,1} + \delta^2 z_{0,-1} + \delta'^2 z_{1,0} + \delta'^2 z_{-1,0}) \\ & + \frac{1}{32}(\delta^2 z_{0,1} - \delta^2 z_{0,-1} + \delta'^2 z_{1,0} - \delta'^2 z_{-1,0}) - \frac{1}{32}(\delta^2 z_{1,0} - \delta^2 z_{-1,0} + \delta'^2 z_{0,1} - \delta'^2 z_{0,-1}) \\ & + \frac{1}{128}(\delta^2 z_{1,1} - \delta^2 z_{1,-1} - \delta^2 z_{-1,1} + \delta^2 z_{-1,-1}) - \frac{1}{128}(\delta'^2 z_{1,1} - \delta'^2 z_{-1,1} - \delta'^2 z_{1,-1} + \delta'^2 z_{-1,-1}) \\ & - \frac{1}{128}(\delta^4 z_{0,0} + \delta'^4 z_{0,0}) - \frac{1}{512}(\delta^4 z_{0,1} - \delta^4 z_{0,-1} - \delta'^4 z_{1,0} + \delta'^4 z_{-1,0}) \\ & + \frac{3}{512}(\delta^4 z_{1,0} - \delta^4 z_{-1,0} + \delta'^4 z_{0,1} - \delta'^4 z_{0,-1}) - \frac{1}{256}(\delta^2 \delta'^2 z_{1,0} - \delta^2 \delta'^2 z_{-1,0} + \delta^2 \delta'^2 z_{0,1} - \delta^2 \delta'^2 z_{0,-1}) \\ & + \frac{1}{1024}(\delta^6 z_{0,0} + \delta'^6 z_{0,0}) - \frac{1}{1024}(\delta^2 \delta'^2 z_{1,1} - \delta^2 \delta'^2 z_{1,-1} - \delta^2 \delta'^2 z_{-1,1} + \delta^2 \delta'^2 z_{-1,-1})^\dagger \\ & + \frac{3}{2048}(\delta^4 z_{1,1} - \delta^4 z_{1,-1} - \delta^4 z_{-1,1} + \delta^4 z_{-1,-1}) + \frac{3}{2048}(\delta'^4 z_{1,1} - \delta'^4 z_{-1,1} - \delta'^4 z_{1,-1} + \delta'^4 z_{-1,-1}) \\ & + \frac{1}{4096}(\delta^6 z_{0,1} - \delta^6 z_{0,-1} + \delta'^6 z_{1,0} - \delta'^6 z_{-1,0}) - \frac{5}{4096}(\delta^6 z_{1,0} - \delta^6 z_{-1,0} + \delta'^6 z_{0,1} - \delta'^6 z_{0,-1}) \\ & + \frac{1}{4096}(\delta^4 \delta'^2 z_{0,1} - \delta^4 \delta'^2 z_{0,-1} + \delta^2 \delta'^4 z_{1,0} - \delta^2 \delta'^4 z_{-1,0}) + \frac{3}{4096}(\delta^4 \delta'^2 z_{1,0} - \delta^4 \delta'^2 z_{-1,0} + \delta^2 \delta'^4 z_{0,1} - \delta^2 \delta'^4 z_{0,-1}) \end{aligned} \quad \dots\dots(xviii).$$

This includes seventh order difference terms, but is very lengthy and troublesome.

Taken only to fifth order differences and expressed in terms of second differences we have‡

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = & z_{0,0} + \frac{1}{4}(z_{0,1} - z_{0,-1} + z_{1,0} - z_{-1,0}) + \frac{1}{16}(z_{1,1} - z_{1,-1} + z_{-1,1} + z_{-1,-1}) \\ & + \frac{1}{8}(\delta^2 z_{0,0} + \delta'^2 z_{0,0}) + \frac{3}{64}(\delta^2 z_{0,1} - \delta^2 z_{1,0} + \delta'^2 z_{1,0} - \delta'^2 z_{0,1}) \\ & - \frac{1}{32}(\delta^2 z_{0,-1} - \delta^2 z_{-1,0} + \delta'^2 z_{-1,0} - \delta'^2 z_{0,-1}) - \frac{3}{256}(\delta^2 z_{1,1} + \delta'^2 z_{1,1}) \\ & + \frac{1}{128}(\delta^2 z_{1,-1} + \delta^2 z_{-1,1} + \delta'^2 z_{-1,1} + \delta'^2 z_{1,-1}) - \frac{1}{256}(\delta^2 z_{-1,-1} + \delta'^2 z_{-1,-1}) \\ & + \frac{3}{512}(\delta^2 z_{2,0} - \delta^2 z_{-2,0} + \delta'^2 z_{0,2} - \delta'^2 z_{0,-2}) - \frac{1}{512}(\delta^2 z_{0,2} - \delta^2 z_{0,-2} + \delta'^2 z_{2,0} - \delta'^2 z_{-2,0}) \end{aligned} \quad \dots\dots(xviii) \text{ bis.}$$

* The common factor 2 is retained for convenience of continuous machining.

† Erroneously given as $\delta^2 \delta'^2 z_{1,1}$ in *Tracts for Computers*, No. III, p. 30, third line from top of page.

‡ This must be deduced from Eqn. (xxvii), pp. 29-30 of *Tracts for Computers*, No. III, as in the Eqn. (xxviii), p. 32, the terms $-\frac{1}{24}\theta^2(1-\theta^2)\delta^4 z_{0,0}$ and $-\frac{1}{24}\chi^2(1-\chi^2)\delta^4 z_{0,0}$ have I regret to say been omitted.

The additional terms if we go to sixth, *not to seventh*, order differences are in terms of δ^2 and δ'^2

$$\begin{aligned} \frac{1}{1024} (\delta^2 z_{2,0} - \delta^2 z_{0,2} + \delta^2 z_{-2,0} - \delta^2 z_{0,-2}) + \frac{1}{1024} (\delta'^2 z_{0,2} - \delta'^2 z_{2,0} + \delta'^2 z_{0,-2} - \delta'^2 z_{-2,0}) \\ - \frac{1}{256} (\delta^2 z_{1,0} - \delta^2 z_{0,1} + \delta^2 z_{-1,0} - \delta^2 z_{0,-1}) - \frac{1}{256} (\delta'^2 z_{0,1} - \delta'^2 z_{1,0} + \delta'^2 z_{0,-1} - \delta'^2 z_{-1,0}) \\ + \frac{1}{2048} (\delta^2 z_{1,2} - \delta^2 z_{-1,2} + \delta^2 z_{-1,-2} - \delta^2 z_{1,-2}) + \frac{1}{2048} (\delta'^2 z_{2,1} - \delta'^2 z_{-2,1} + \delta'^2 z_{-2,-1} - \delta'^2 z_{1,-1}) \\ - \frac{1}{256} (\delta^2 z_{1,1} - \delta^2 z_{-1,-1} + \delta^2 z_{-1,1} - \delta^2 z_{1,-1}) - \frac{1}{256} (\delta'^2 z_{1,1} - \delta'^2 z_{-1,1} + \delta'^2 z_{-1,-1} - \delta'^2 z_{1,-1}) \\ + \frac{3}{2048} (\delta^2 z_{2,1} - \delta^2 z_{-2,1} + \delta^2 z_{-2,-1} - \delta^2 z_{2,-1}) + \frac{3}{2048} (\delta'^2 z_{1,2} - \delta'^2 z_{-1,-2} + \delta'^2 z_{-1,2} - \delta'^2 z_{1,-2}) \end{aligned} \dots\dots(x)$$

If we proceed to seventh order differences, expressing all differences in terms of δ^2 and δ'^2 we have

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = z_{0,0} + \frac{1}{4} (z_{0,1} + z_{1,0} - z_{-1,0} - z_{0,-1}) + \frac{1}{16} (z_{1,1} + z_{-1,-1} - z_{-1,1} - z_{1,-1}) \\ + \frac{1}{8} (\delta^2 z_{0,0} + \delta'^2 z_{0,0}) - \frac{221}{4096} (\delta^2 z_{1,0} + \delta'^2 z_{0,1}) + \frac{218}{4096} (\delta^2 z_{0,1} + \delta'^2 z_{1,0}) \\ + \frac{125}{4096} (\delta^2 z_{-1,0} + \delta'^2 z_{0,-1}) - \frac{122}{4096} (\delta^2 z_{0,-1} + \delta'^2 z_{-1,0}) - \frac{76}{4096} (\delta^2 z_{1,1} + \delta'^2 z_{1,1}) \\ + \frac{48}{4096} (\delta^2 z_{-1,1} + \delta'^2 z_{-1,1} + \delta^2 z_{-1,1} + \delta'^2 z_{1,-1}) - \frac{20}{4096} (\delta^2 z_{-1,-1} + \delta'^2 z_{-1,-1}) + \frac{42}{4096} (\delta^2 z_{2,0} + \delta'^2 z_{0,2}) \\ - \frac{14}{4096} (\delta^2 z_{0,2} + \delta'^2 z_{2,0}) - \frac{34}{4096} (\delta^2 z_{-2,0} + \delta'^2 z_{0,-2}) + \frac{6}{4096} (\delta^2 z_{0,-2} + \delta'^2 z_{-2,0}) \\ + \frac{10}{4096} (\delta^2 z_{2,1} + \delta'^2 z_{1,2}) + \frac{3}{4096} (\delta^2 z_{1,2} + \delta'^2 z_{2,1}) - \frac{4}{4096} (\delta^2 z_{2,-1} + \delta'^2 z_{-1,2}) \\ - \frac{1}{4096} (\delta^2 z_{-1,2} + \delta'^2 z_{2,-1}) - \frac{8}{4096} (\delta^2 z_{-2,1} + \delta'^2 z_{1,-2}) - \frac{3}{4096} (\delta^2 z_{1,-2} + \delta'^2 z_{-2,1}) \\ + \frac{2}{4096} (\delta^2 z_{-2,-1} + \delta'^2 z_{-1,-2}) + \frac{1}{4096} (\delta^2 z_{-1,-2} + \delta'^2 z_{-2,-1}) - \frac{5}{4096} (\delta^2 z_{3,0} + \delta'^2 z_{0,3} - \delta^2 z_{-3,0} - \delta'^2 z_{0,-3}) \end{aligned} \dots\dots(xviii)$$

This formula like (xviii) *ter* is cumbersome and inferior to (xvii) *ter*, but it gives the value correct to seven decimal places. Of course nothing like this number of terms is requisite later in nor indeed for most statistical purposes at this part of the table. It has been used to show that the central difference formula including δ^6 , δ'^6 , will be satisfactory up to the limits of the tabling, and be advantageous when the interpolate is near an interpolant.

(c) *Lagrangian Formulae*: (i) *Mid-point*.

By this term I understand here formulae giving the interpolate in terms of interpolants, and not of their differences.

The formula taken to fifth order differences in terms of tabular entries only runs as follows:

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{512} \{ 240z_{0,0} + 193(z_{1,0} + z_{0,1}) - 65(z_{-1,0} + z_{0,-1}) + 104z_{1,1} + 8z_{-1,-1} \\ - 40(z_{-1,1} + z_{1,-1}) - 28(z_{2,0} + z_{0,2}) + 20(z_{-2,0} + z_{0,-2}) - 7(z_{1,2} + z_{2,1}) \\ - (z_{-2,-1} + z_{-1,-2}) + 3(z_{2,-1} + z_{-1,2}) + 5(z_{-2,1} + z_{1,-2}) \\ + 3(z_{3,0} + z_{0,3}) - 3(z_{-3,0} + z_{0,-3}) \} \end{aligned} \dots$$

If we proceed to sixth order differences, but do not include the seventh, the extra terms present in (xviii) *ter* in terms of tabular entries are

$$\begin{aligned} \frac{1}{2048} \{ -32z_{0,0} + 2(z_{1,0} + z_{0,1}) + 2(z_{-1,0} + z_{0,-1}) + 54(z_{1,1} + z_{-1,-1}) \\ - 22(z_{1,-1} + z_{-1,1}) - 8(z_{2,0} + z_{0,2}) - 8(z_{-2,0} + z_{0,-2}) - 18(z_{1,2} + z_{2,1}) \\ - 18(z_{-2,-1} + z_{-1,-2}) + 14(z_{2,-1} + z_{-1,2}) + 14(z_{-2,1} + z_{1,-2}) \\ + 2(z_{3,0} + z_{0,3}) + 2(z_{-3,0} + z_{0,-3}) + 2(z_{2,2} + z_{-2,-2}) - 2(z_{2,-2} + z_{-2,2}) \\ + 3(z_{3,1} + z_{1,3} + z_{-1,-3} + z_{-3,-1}) - 3(z_{1,-3} + z_{-3,1} + z_{3,-1} + z_{-1,3}) \} \end{aligned} \dots\dots(x)$$

Combining (xviii) *bis* and (xviii) *ter* we have a formula up to sixth but not including seventh order differences as follows:

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{2048} \{ 928z_{0,0} + 774(z_{1,0} + z_{0,1}) - 258(z_{-1,0} + z_{0,-1}) + 470z_{1,1} + 86z_{-1,-1} \\ - 182(z_{1,-1} + z_{-1,1}) - 120(z_{2,0} + z_{0,2}) + 72(z_{-2,0} + z_{0,-2}) - 46(z_{1,2} + z_{2,1}) \\ - 22(z_{-2,-1} + z_{-1,-2}) + 26(z_{2,-1} + z_{-1,2}) + 34(z_{-2,1} + z_{1,-2}) \\ + 14(z_{3,0} + z_{0,3}) - 10(z_{-3,0} + z_{0,-3}) + 2(z_{2,2} + z_{-2,-2}) - 2(z_{2,-2} + z_{-2,2}) \\ + 3(z_{3,1} + z_{1,3} + z_{-1,-3} + z_{-3,-1}) - 3(z_{1,-3} + z_{-3,1} + z_{3,-1} + z_{-1,3}) \} \end{aligned} \dots\dots(x)$$

If we include seventh differences the full mid-point Lagrangian form of the formula is

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{4096} \{ 1856z_{0,0} + 1556(z_{1,0} + z_{0,1}) - 524(z_{-1,0} + z_{0,-1}) + 1016z_{1,1} \\ + 96z_{-1,-1} - 364(z_{1,-1} + z_{-1,1}) - 280(z_{2,0} + z_{0,2}) + 184(z_{-2,0} + z_{0,-2}) \\ + 52(z_{3,0} + z_{0,3}) - 44(z_{-3,0} + z_{0,-3}) - 116(z_{2,1} + z_{1,2}) - 20(z_{-2,-1} + z_{-1,-2}) \\ + 44(z_{2,-1} + z_{-1,2}) + 76(z_{-2,1} + z_{1,-2}) + 6z_{3,2} + 2z_{-2,-2} \\ - 4(z_{2,-2} + z_{-2,2}) + 10(z_{3,1} + z_{1,3}) + 2(z_{-3,-1} + z_{-1,-3}) - 4(z_{-3,-1} + z_{-1,-3}) \\ - 8(z_{-3,1} + z_{1,-3}) - 5(z_{4,0} + z_{0,4}) + 5(z_{-4,0} + z_{0,-4}) \} \quad \text{.....(xix) quater.}$$

Lagrangian Formulae: (ii) Mid-panel.

If we deal only up to fifth differences,

$$z_{\frac{1}{2}, \frac{1}{2}} = 512 \{ 174(z_{0,0} + z_{0,1} + z_{1,0} + z_{1,1}) - 27(z_{-1,0} + z_{-1,1} + z_{0,2} + z_{1,2} + z_{2,1} + z_{2,0} + z_{1,-1} + z_{0,-1}) \\ + 3(z_{-2,0} + z_{-2,1} + z_{0,3} + z_{1,3} + z_{3,1} + z_{3,0} + z_{1,-2} + z_{0,-2}) + 2(z_{-1,-1} + z_{-1,2} + z_{2,2} + z_{2,-1}) \} \quad \text{.....(xx).}$$

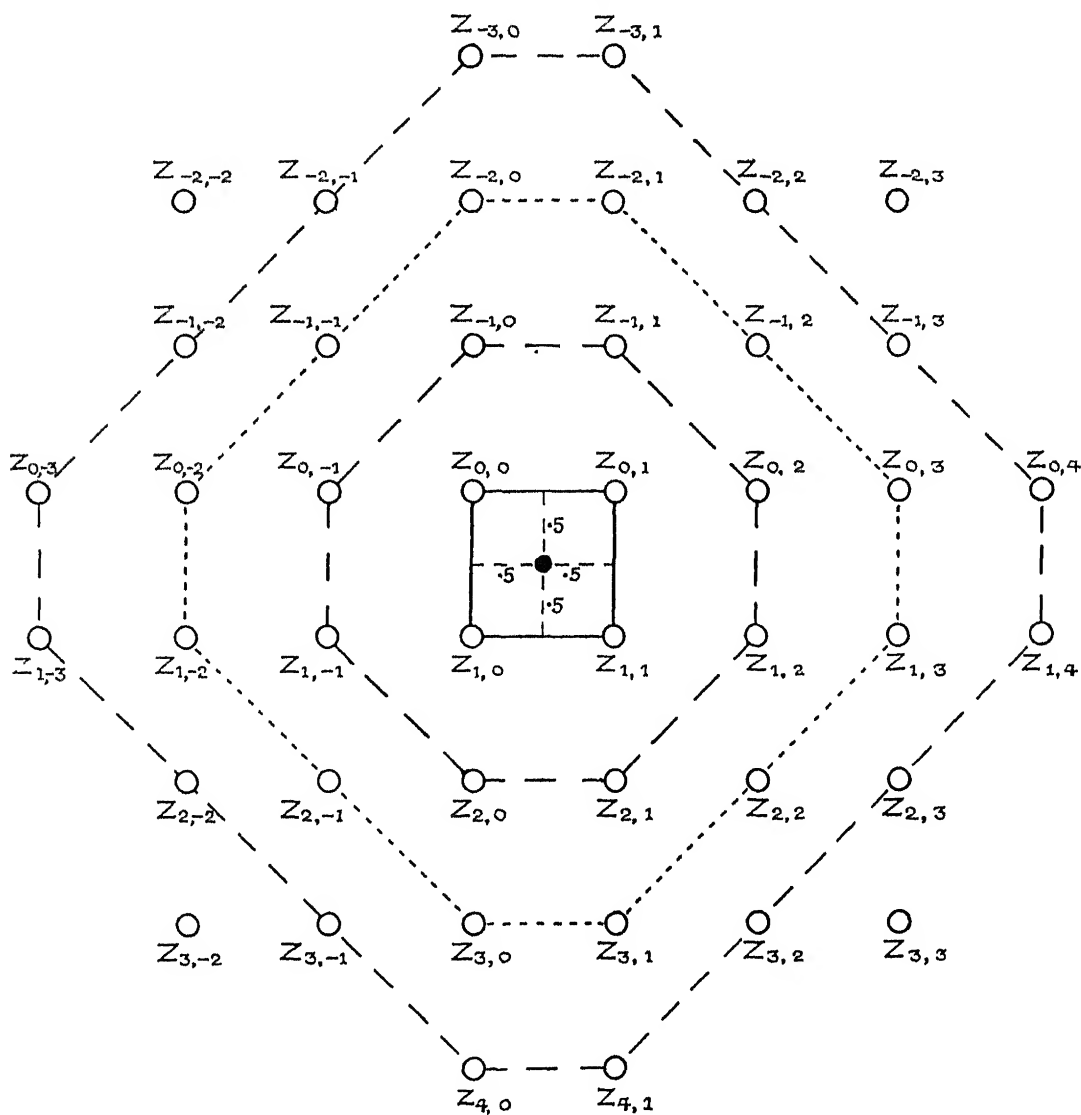


Fig. 2.

Examining the diagram (p. xix) we see that this may be expressed verbally as

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{512} \{ 174 \times (\text{sum of values at angles of square}) - 27 \times (\text{sum of values at angles of inner octagon}) \\ + 3 \times (\text{sum of values at angles of outer octagon}) + 2 \times (\text{sum of values at mid-points of longer sides of outer octagon}) \} \quad \dots\dots(\text{X})$$

If we now include sixth and seventh order differences we find

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{4096} \{ 1454(z_{0,0} + z_{0,1} + z_{1,0} + z_{1,1}) - 276(z_{0,-1} + z_{-1,0} + z_{1,-1} + z_{-1,1} + z_{2,0} + z_{0,2} + z_{1,2} + z_{2,1}) \\ + 52(z_{0,-2} + z_{-2,0} + z_{-2,1} + z_{1,-2} + z_{3,0} + z_{0,3} + z_{3,1} + z_{1,3}) + 34(z_{-1,-1} + z_{2,-1} + z_{-1,2} + z_{2,2}) \\ - 5(z_{-3,0} + z_{0,-3} + z_{-3,1} + z_{1,-3} + z_{4,0} + z_{0,4} + z_{4,1} + z_{1,4}) \\ - 3(z_{-2,-1} + z_{-1,-2} + z_{-2,2} + z_{2,-2} + z_{3,-1} + z_{-1,3} + z_{3,2} + z_{2,3}) \} \quad \dots\dots(\text{X})$$

Now examining the diagram we see a square and three octagons, the inner, the mid and the outer and the above result may be read as follows:

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{4096} \{ 1454 \times (\text{sum of values at angles of square}) \\ - 276 \times (\text{sum of values at angles of inner octagon}) \\ + 52 \times (\text{sum of values at angles of mid-octagon}) \\ + 34 \times (\text{sum of values at points of bisection of longer sides of mid-octagon}) \\ - 5 \times (\text{sum of values at angles of outer octagon}) \\ - 3 \times (\text{sum of values at points of trisection of longer sides of outer octagon}) \} \quad \dots\dots(\text{XX})$$

Undoubtedly formulae (xx) *bis* and (xx) *quater* are the most convenient and rapid to apply of the series, but unless we compute the two we are not in a position to determine (without a previous knowledge of the capacity of the table) whether (xx) *bis* is sufficient for our immediate purpose.

Illustration 4, and test of what differences are needful in the region, where the table changes the order of argument for p and q.

We will now find $I_{.19}(10.5, 10.5)$, the last value of $I_x(i+0.5, i'+0.5)$ tabled, from unit values. The value in the table is .000,8006.

The labour of applying (xvii) or (xviii) involving the computing of high order differences including the z values may be replaced by (xvii) *bis*, (xvii) *ter*, (xviii) *bis* and (xviii) *ter* which involve only a knowledge of the first order differences.

The diagram Fig. 3 shows the octagon system applied to this special example, the z values and second differences both ways being provided.

Formula (xvii) *bis*.

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{4} \left| \begin{array}{c} 10,423 \\ 17,309 \\ 6,154 \\ 3,538 \\ 37,424 \end{array} \right| - \frac{5}{128} \left| \begin{array}{c} 12,190 \\ 4,506 \\ 7,109 \\ 18,200 \\ 42,005 \end{array} \right| - \frac{5}{128} \left| \begin{array}{c} 2,412 \\ 3,255 \\ 1,430 \\ 1,000 \\ 8,097 \end{array} \right| + \frac{1}{512} \left| \begin{array}{c} 7,747 \\ 25,982 \\ 2,706 \\ 10,696 \\ 47,131 \end{array} \right| + \frac{1}{512} \left| \begin{array}{c} 5,391 \\ 301 \\ 6,852 \\ 589 \\ 13,223 \end{array} \right| + \frac{3}{512} \left| \begin{array}{c} 31,120 \\ 1,588 \\ 2,637 \\ 43,830 \\ 79,175 \end{array} \right| + \frac{3}{512} \left| \begin{array}{c} 1,712 \\ 4,234 \\ 1,963 \\ 672 \\ 8,581 \end{array} \right| \\ = 9356 \quad - 1640.8 \quad - 316.3 \quad + 92.1 \quad + 25.8 \quad + 463.9 \quad + 50.3 \\ = .000,8031 \text{ (after adding the requisite zeros).}$$

Hence formula (xvii) *bis* is in error about 2 units in the sixth decimal place. This will be accurate for some purposes, but possibly not enough so for all.

We now proceed in the same way with formula (xvii) *ter*. We find

$$z_{4,1} = \frac{1}{4096} [1024 \begin{vmatrix} 10,123 \\ 17,309 \\ 6,154 \\ 3,538 \\ 37,424 \end{vmatrix} 173 \begin{vmatrix} 12,190 \\ 4,506 \\ 7,109 \\ 18,200 \\ 42,005 \end{vmatrix} 173 \begin{vmatrix} 2,412 \\ 3,255 \\ 1,430 \\ 1,000 \\ 8,097 \end{vmatrix} + 42 \begin{vmatrix} 31,120 \\ 1,588 \\ 2,637 \\ 43,830 \\ 79,175 \end{vmatrix} + 42 \begin{vmatrix} 1,712 \\ 4,234 \\ 1,963 \\ 672 \\ 8,581 \end{vmatrix} + 11 \begin{vmatrix} 7,747 \\ 25,982 \\ 2,706 \\ 10,696 \\ 47,131 \end{vmatrix}]$$

$$+ 11 \begin{vmatrix} 5,391 \\ 391 \\ 6,852 \\ 589 \\ 13,223 \end{vmatrix} 3 \begin{vmatrix} 21,034 \\ 59,161 \\ 902 \\ 4,166 \\ 85,263 \end{vmatrix} 3 \begin{vmatrix} 4,080 \\ 248 \\ 8,407 \\ 849 \\ 13,584 \end{vmatrix} - 5 \begin{vmatrix} 74,128 \\ 98,008 \\ 537 \\ 935 \\ 173,608 \end{vmatrix} - 5 \begin{vmatrix} 1,158 \\ 426 \\ 5,329 \\ 2,602 \\ 9,515 \end{vmatrix}]$$

$$= \frac{1}{4096} (38,322,176 - 7,266,865 - 1,400,781 + 3,325,350 + 360,402 + 518,441 + 145,453 - 225,789 - 10,752 - 868,040 - 47,575)$$

$$= \frac{1}{4096} (-42,671,822 - 9,879,802) = -000,8005[9,$$

INTERPOLATION for $I_{19}(10.5, 10.5)$ from UNIT VALUES of p and q .

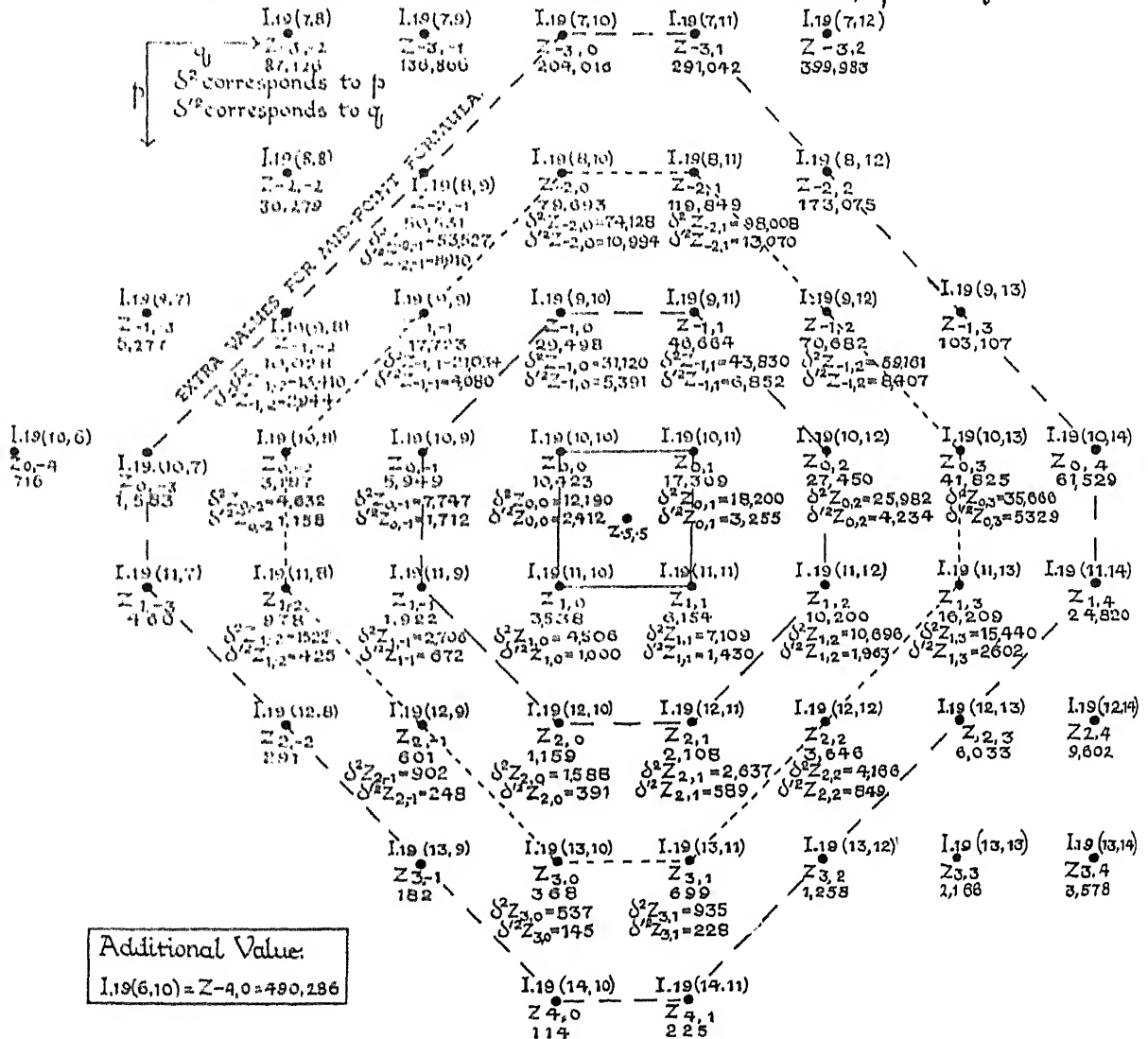


Fig. 3.

introducing the required three zeros and the decimal point, or to seven figures

$$z_{\frac{1}{2}, \frac{1}{2}} = \cdot 000,8006,$$

the exact tabular value.

We now turn to the formula (xviii) *bis* for the mid-point interpolation and find

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} &= 10423 - 3650 - 1544 \cdot 3 + 1825 \cdot 25 + 536 \cdot 2 + 615 \cdot 4 - 100 \cdot 07 + 422 \cdot 34 - 98 \cdot 1 - 407 \cdot 02 - 20 \cdot 99 \\ &= 8001 \cdot 7, \end{aligned}$$

or introducing the three zeros

$$z_{\frac{1}{2}, \frac{1}{2}} = \cdot 000,8002.$$

This result is out 4 units in the seventh decimal place.

We now evaluate (xviii) *ter* to find the addition if we go up to the sixth, but not including seventh differences. We have:

Extra terms = $38 \cdot 19 - 32 \cdot 28 - 19 \cdot 72 + 79 \cdot 71 - 63 \cdot 52 = 2 \cdot 43$ or $= \cdot 000,0002 | 4$ with zeros inserted. Adding to the previous value $\cdot 000,8001 | 7$ we find

$$z_{\frac{1}{2}, \frac{1}{2}} = \cdot 000,8004.$$

This result shows an error of 2 in the last decimal place and is therefore not as good as (xvii) *ter* which includes seventh differences, i.e. δ^6 . We conclude accordingly that in the worst case, i.e. that of $z_{\frac{1}{2}, \frac{1}{2}}$, the answer will, if we do not proceed beyond sixth differences, be given to an error of not more than two units in the seventh decimal place.

If we now apply (xviii) *quater* we have

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} &= 10,423 - 3,650 - 1,544 | 31 + 1,825 | 25 - 418 | 75 + 1,021 | 88 \\ &\quad + 1,001 | 95 - 391 | 32 - 158 | 44 + 59 | 81 + 633 | 52 - 122 | 63 \\ &\quad - 90 | 14 - 624 | 93 + 22 | 89 + 11 | 23 + 8 | 27 - 14 | 50 - 9 | 09 \\ &\quad + 5 | 45 - 10 | 69 - 192 | 25 + 27 | 57 - 192 | 25 + 191 | 43 \\ &= 15232 | 25 - 7227 | 05 = 8005 | 20, \end{aligned}$$

or introducing the three zeros

$$I_{\cdot 19}(10 \cdot 5, 10 \cdot 5) = \cdot 000,8005 | 2,$$

which is as close to the tabled value $\cdot 000,8006$ as we can hope to get from a mid point formula, and again confirms the view that a mid-panel formula is better than a mid-point when the interpolate is at the middle of the panel, the number of differences used being the same.

Lagrangian Type of Formulae.

These are not so satisfactory for use in the case of the mid-point formulae, as in the case of the more compact and symmetrical mid-panel formulae. But if the interpolant is nearer to a point than to the middle of a panel, the mid-point will probably give the better result.

Starting with (xix),

$$\begin{aligned} I_{\cdot 19}(10 \cdot 5, 10 \cdot 5) &= z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{512} [240 \times 10,423 + 193 \left| \begin{array}{r} 3,538 \\ 17,309 \\ \hline 20,847 \end{array} \right| - 65 \left| \begin{array}{r} 29,498 \\ 5,949 \\ \hline 35,447 \end{array} \right| + 104 \times 6,154 \\ &\quad + 8 \times 17,723 - 40 \left| \begin{array}{r} 46,664 \\ 1,922 \\ \hline 48,586 \end{array} \right| - 28 \left| \begin{array}{r} 1,159 \\ 27,450 \\ \hline 28,609 \end{array} \right| + 20 \left| \begin{array}{r} 79,693 \\ 3,187 \\ \hline 82,880 \end{array} \right| - 7 \left| \begin{array}{r} 10,200 \\ 2,108 \\ \hline 12,308 \end{array} \right| \\ &\quad - \left| \begin{array}{r} 50,531 \\ 10,028 \\ \hline 60,559 \end{array} \right| + 3 \left| \begin{array}{r} 601 \\ 70,682 \\ \hline 71,283 \end{array} \right| + 5 \left| \begin{array}{r} 119,884 \\ 978 \\ \hline 120,862 \end{array} \right| + 3 \left| \begin{array}{r} 368 \\ 41,825 \\ \hline 42,193 \end{array} \right| - 3 \left| \begin{array}{r} 204,016 \\ 1,583 \\ \hline 205,599 \end{array} \right| \\ &= \frac{1}{512} (990,8954 - 581,2059) = 8001 | 7, \end{aligned}$$

or with the requisite zeros $= \cdot 000,8002$, agreeing with the result of (xviii) *bis*, as it must do. In the same manner (xix) *ter* gives us

$$z_{\frac{1}{2}, \frac{1}{2}} = \cdot 000,8004 | 1.$$

y, and here we may put down the values completely, to indicate the extent of the requisite work, *inter* gives us

$$(0.5, 10.5) = \frac{1}{1096} [1856 + 10,423 + 1,556] \begin{vmatrix} 3,538 \\ 17,309 \\ 20,847 \end{vmatrix} \begin{vmatrix} 524 \\ 5,949 \\ 35,447 \end{vmatrix} + 1016 \times 6154 + 96 \times 17,723$$

$$\begin{vmatrix} 364 & 1,922 & 280 & 1,159 & 184 & 79,693 & 152 & 368 & -44 & 204,016 \\ & 46,664 & & 27,450 & & 3,187 & & 41,825 & & 1,583 \\ & 48,586 & & 28,609 & & 82,880 & & 42,193 & & 205,599 \end{vmatrix}$$

$$116 \begin{vmatrix} 2,108 & 20,50,531 & 44 & 601 & 76 & 119,849 & 6 \times 3646 + 2 \times 30,279 \\ & 10,200 & 10,028 & 70,682 & & 978 \\ & 12,308 & 60,559 & 71,283 & & 120,827 \end{vmatrix}$$

$$4) \begin{vmatrix} 291 & 101 & 699 & 2,136,866 & 4 & 182 & -8 & 291,042 \\ 173,075 & 16,209 & 5,277 & 103,107 & & 460 \\ 173,366 & 16,908 & 142,143 & 103,289 & & 291,502 \end{vmatrix}$$

$$5) \begin{vmatrix} 114 & 5 & 490,286 \\ 61,529 & 716 \\ 61,643 & 491,002 \end{vmatrix}$$

$$\frac{1}{1096} [9249,0962 \quad 5970,1439] \quad 8005[25,$$

the zeros inserted $I_{19}(10.5, 10.5) = -000,8005[25,$

with the result of (xviii) *quater*. The additions are not necessary and the whole work may be done in continuous operation on the machine.

Now take the mid panel Lagrangian formulae in terms of the ordinates or tabular entries. These are convenient formulae (xx) *bis* and (xx) *quater*. Up to fifth order differences,

$$z_{4,4} = \frac{1}{512} [174 \begin{vmatrix} 10,423 & 27 & 29,498 & 3 & 79,693 & 2 & 70,682 \\ & 17,309 & & 46,664 & & 119,849 & 3,646 \\ & 3,538 & & 27,450 & & 41,825 & 601 \\ & 6,154 & & 10,200 & & 16,209 & 17,723 \\ & 37,424 & & 2,108 & & 699 & 92,652 \\ & & & 1,159 & & 368 \\ & & & 1,922 & & 978 \\ & & & 5,949 & & 3,187 \\ & & & 124,950 & & 262,808 \end{vmatrix}]$$

$$+ \frac{1}{512} [651,1776 \quad 337,3650 + 78,8424 + 18,5304]$$

$$+ \frac{1}{512} (411,1854) \quad 8031,$$

zeros inserted $z_{4,4} = -000,8031.$

is precisely the value which (xvii) *bis* gives, only the work is far less laborious than finding 24 second differences. But it only gives the value correct to five decimal places.

Now apply (xx) *quater* and find

$$z_{4,4} = \frac{1}{4096} [1454 \times 37,424 - 276 \times 124,950 + 52 \times 262,808 \\ + 34 \times 92,652 - 5 \times 204,016 - 3 \times 173,075] \\ \begin{vmatrix} 291,042 & 103,107 \\ 61,529 & 6,033 \\ 24,820 & 1,258 \\ 225 & 182 \\ 114 & 291 \\ 460 & 10,028 \\ 1,583 & 50,531 \\ 583,789 & 344,505 \end{vmatrix}$$

$$= \frac{1}{4096} (5441,4496 - 3448,6200 + 1366,6016 + 315,0168 - 291,8945 - 103,3515)$$

$$= \frac{1}{4096} (3279,2020) = -000,8005[9,$$

giving the value $\cdot 000,8006$, correct to seven decimal places, and agreeing with what one finds from (xvii) *ter* but with far less labour.

The last two results again indicate that interpolation formulae up to δ^4 will at this part of the table only give accuracy to five decimal places (but of course may be used if five places are adequate), but that formulae up to δ^8 will give the same accuracy to the interpolate as the interpolants themselves possess. Further, the reader will find with very little experience that (xx) *bis* and (xx) *quater* demand far less labour than (xvii) *bis* and (xvii) *ter*, to say nothing of (xvii) itself.

To work out (xx) *quater* demands, as our example indicates, so little extra work on (xx) *bis*, that even when we want to find the degree of approximation involved in stopping at δ^4 , it is easier to find (xx) *bis* and (xx) *quater* than to deal with the successive terms in (xvii).

The object of this section of the Introduction has been principally to indicate that when we leave off the 0.5 changes in argument of the table, we require terms up to δ^8 , to get seven-figure accuracy, but terms to δ^4 will give five-figure accuracy. The Lagrangians (xx) *bis* and (xx) *quater* are the easier formulae to use, if we want $I_x(i+0.5, i'+0.5)$. But in other cases than this particular one we should have to use formula (iv) of *Tracts for Computers*, No. III, and this use is laborious.

(γ) *Univariate Diagonal Formulae to find $I_x(i+0.5, i'+0.5)$.*

The reader may ask whether there is no easier method of reaching the value of an interpolate for such a simple case as $I_x(i+0.5, i'+0.5)$ than these complicated bivariate formulae. We reply: Certainly. They have only been used in the present instances to test how far it is needful to take the differences if we require to go to five, six or seven decimal place accuracy in the general case $I_x(p, q)$. If p and q are of the form $i+0.5$ and $i'+0.5$, then the interpolate lies on a diagonal of interpolants and we may proceed effectively by univariate formulae. As there will be two diagonals passing through the required interpolate, we have a choice of left-upper to right-lower diagonal and right-upper to left-lower diagonal, and desire to know which it is better to use.

We will start with our example of $I_{.19}(10.5, 10.5)$.

Left-upper to right-lower Diagonal.

The univariate formula to be used shall be the mid-panel one

$$z_{\frac{1}{2}, \frac{1}{2}} = \frac{1}{2}(z_{0,0} + z_{1,1}) - \frac{1}{16}(\delta^2 z_{0,0} + \delta^2 z_{1,1}) + \frac{3}{256}(\delta^4 z_{0,0} + \delta^4 z_{1,1}) - \frac{5}{2048}(\delta^6 z_{0,0} + \delta^6 z_{1,1}) + \frac{35}{65536}(\delta^8 z_{0,0} + \delta^8 z_{1,1}) - \frac{63}{524288}(\delta^{10} z_{0,0} + \delta^{10} z_{1,1}) \dots \dots \dots \text{(xxi)}$$

Our interpolants and their differences are as follows:

		z	δ^2	δ^4	δ^6	δ^8
$I_{.19}(6, 6)$	$z_{-4, -4}$	90,095				
$I_{.19}(7, 7)$	$z_{-3, -3}$	52,035	16,304			
$I_{.19}(8, 8)$	$z_{-2, -2}$	30,279	9,200	3,160		
$I_{.19}(9, 9)$	$z_{-1, -1}$	17,723	5,256	1,719	677	
$I_{.19}(10, 10)$	$z_{0,0}$	10,423	3,031	955	346	174
$I_{.19}(11, 11)$	$z_{1,1}$	6,154	1,761	537	189	68
$I_{.19}(12, 12)$	$z_{2,2}$	3,646	1,028	308	100	
$I_{.19}(13, 13)$	$z_{3,3}$	2,166	603	179		
$I_{.19}(14, 14)$	$z_{4,4}$	1,289	357			
$I_{.19}(15, 15)$	$z_{5,5}$	769				

$$\begin{aligned} z_{\frac{1}{2}, \frac{1}{2}} &= \frac{1}{2}(16577) - \frac{1}{16}(4792) + \frac{3}{256}(1492) - \frac{5}{2048}(535) + \frac{35}{65536}(242) \\ &= 8288|5 - 299|5 + 17|73 - 1|3 + 0|13, \\ &= \cdot 000,8288|5 \text{ by linear interpolation,} \\ &= \cdot 000,7989 \text{ up to third differences,} \\ &= \cdot 000,8006|73 \text{ up to fifth differences,} \\ &= \cdot 000,8005|43 \text{ up to seventh differences,} \\ &= \cdot 000,8005|56, \text{ up to ninth differences, or the correct value, i.e.} \\ &= \cdot 000,8006, \text{ up to seven decimal places using } \delta^8. \end{aligned}$$

taking the value up to δ^4 would be adequate for most practical purposes.

upper to left lower Diagonal.

Following are the interpolant and their central differences:

	x	δ	δ^2	δ^4	δ^6	δ^8	δ^{10}
5)	x_{-1}	0					
6)	$x_{-1/2}$	1	8				
7)	x_0	10	65	321			
8)	$x_{1/2}$	84	443	1,599	3,560		
9)	x_1	601	2,420	6,437	9,079	+42	
10)	$x_{3/2}$	3,538	10,834	20,354	14,640	-15,575	-8,909
11)	x_2	17,309	39,602	48,911	4,626	-40,101	+39,023
2)	$x_{1/2}$	50,682	117,281	82,094	45,489	-25,004	
3)	x_1	241,336	277,054	69,788	120,608		
4)	$x_{3/2}$	689,044	506,615	63,126			
5)	x_2	1,643,367	673,050				
6)	$x_{5/2}$	3,270,740					

we can see that the differences here are very large and varying rapidly. The success of the application of central difference formula will depend entirely on the rapid convergency of its coefficients. We have

$$z_{4,4} = \frac{1}{2}(208474) - \frac{1}{16}(504366) + \frac{1}{128}(692963) - \frac{1}{2048}(19266) + \frac{35}{65536}(-55676) - \frac{63}{524288}(30714) \\ 10423.5 - 3132.25 + 541.70 - 47.04 - 29.73 + 3.69,$$

$z_{4,4} = .001,0423$ by linear interpolation,
 $.000,7271$ up to third differences,
 $.000,8083$ up to fifth differences,
 $.000,8036$ up to seventh differences,
 $.000,8006$ up to ninth differences,
 $.000,8007$ up to eleventh differences.

Interpolate is worse up to eleventh than it is to ninth differences, which give the correct value. But without knowledge of that value we have no reason for stopping at that point and we are ignorant of what further differences would produce.

As that at this part of the table the left upper to right lower diagonal gives a better system of values and a far more rapid approach to the correct value,

we try a similar problem further on in the table and determine $I_{58}(40.5, 21.5)$. This is a value midway $I_{58}(40, 21)$ and $I_{58}(41, 22)$.

upper to right lower Diagonal.

	x	δ^2	δ^4
$I_{58}(36, 17)$		-0650,895	
$I_{58}(37, 18)$		-0751,282	5924
$I_{58}(38, 19)$		-0857,593	5437
$I_{58}(39, 20)$		-0969,341	4943
$I_{58}(40, 21)$		-1086,032	4453
$I_{58}(41, 22)$		-1207,176	3967
$I_{58}(42, 23)$		-1332,287	3498
$I_{58}(43, 24)$		-1460,896	3043
$I_{58}(44, 25)$		-1592,548	2608
$I_{58}(45, 26)$		-1726,808	

$$z_{4,4} = I_{58}(40.5, 21.5) = \frac{1}{2}(-2293,208) - \frac{1}{16}(8420) + \frac{3}{256}(21) \\ = -1146,604 - .0000,526|25 + .0000,000|25 \\ = -1146,078.$$

This is very satisfactory, the δ^4 terms have become so small as to be irregular, and they are negligible; accordingly the answer is given by using merely the δ^2 and this involves taking only four interpolants out of the table. Thus we have good omen of the degree of accuracy that can be obtained by using only δ^2 at this part of the table. We now turn to the other diagonal.

Right-upper to left-lower Diagonal.

	z	δ^2	δ^4	δ^6	δ^8	δ^{10}
$I_{.58}(35, 27)$	·5927,339					
$I_{.58}(36, 26)$	·4903,777	2,707				
$I_{.58}(37, 25)$	·3882,922	68,321	-12,184			
$I_{.58}(38, 24)$	·2930,388	121,751	-20,993	5881		
$I_{.58}(39, 23)$	·2099,605	154,188	-23,921	6035	2133	
$I_{.58}(40, 22)$	·1423,010	162,704	-20,814	4056	921	25
$I_{.58}(41, 21)$	·0909,119	150,406	-13,651	1156	316	313
$I_{.58}(42, 20)$	·0545,636	124,457	-5,332	1428	1240	
$I_{.58}(43, 19)$	·0306,610	93,176	+1,559	-2772		
$I_{.58}(44, 18)$	·0160,760	63,454	+5,678			
$I_{.58}(45, 17)$	·0078,364	39,410				
$I_{.58}(46, 16)$	·0035,378					

$$z_{4,4} = I_{.58}(40.5, 21.5) = \frac{1}{2}(2332, 129) - \frac{1}{16}(313, 110) + \frac{3}{256}(-34465) - \frac{5}{2048}(5212) \\ + \frac{35}{65536}(-605) - \frac{63}{524288}(-288) \\ = .1166,064|5 - 19569|37 - 403|89 - 12|75 - 0|32 + 0|03.$$

We have accordingly $I_{.58}(40.5, 21.5) = .1166,064|5$ by linear interpolation,
 $= .1146,495|13$ up to third differences,
 $= .1146,091|24$ up to fifth differences,
 $= .1146,078|49$ up to seventh differences,
 $= .1146,078|17$ up to ninth differences,
 $= .1146,078|20$ up to eleventh differences.

Thus we do not get the correct answer this way without including δ^6 or δ^8 . Accordingly we conclude that to obtain $I_x(i + \frac{1}{2}, i' + \frac{1}{2})$ we should work with the left-upper to the right-lower diagonal, which will be found far shorter than using the other diagonal. Near the borders of the table we should use the same diagonal, but proceed by forward or backward differences as the case may be.

(δ) Diagonal Interpolation.

The effectiveness of the interpolation from the left-upper to the right-lower diagonal leads us to investigate another general method of interpolating into the incomplete B-function. We have seen that the differences converge more rapidly along a vertical than a horizontal line in our diagram (Fig. 3) and much more rapidly than either along the left-upper to the right-lower diagonal. The latter line as it alone concerns us here, we will briefly term the "diagonal."

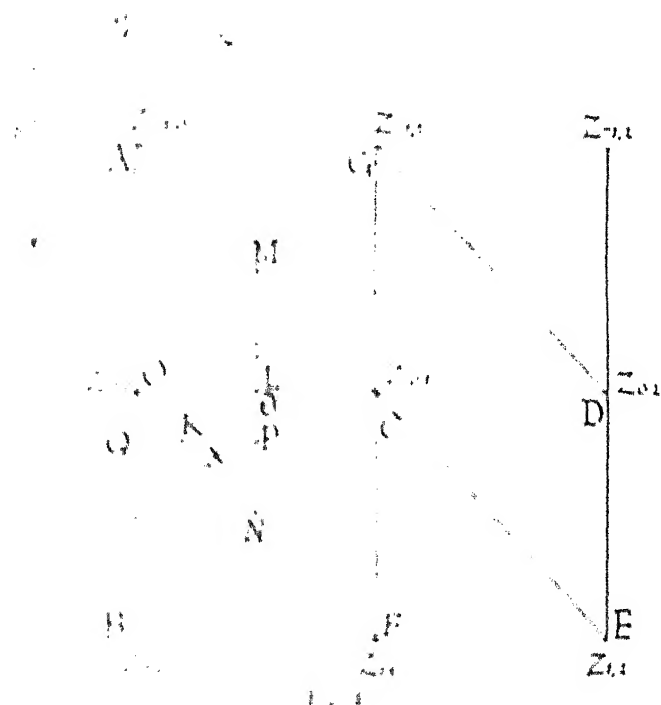
Now if we have rectangular axes and the position of the interpolate be given in the usual way by θ, χ , the value of $z_{\theta, \chi}$ is given by the expression (xxii) below up to fifth order differences when we replace those differences by the tabulated interpolants:

$$z_{\theta, \chi} = \frac{1}{12} \{ (6 + \theta\phi + \chi\psi) (2 + \theta\phi + \chi\psi) + \theta\phi\chi\psi \} \{ \phi\psi z_{0,0} + \phi\chi z_{0,1} + \theta\chi z_{1,1} + \theta\psi z_{1,0} \} \\ - \frac{1}{4} \theta\phi (1 + \frac{1}{6}\theta\phi + \frac{1}{3}\chi\psi) \{ (1 + \phi) (\psi z_{-1,0} + \chi z_{-1,1}) + (1 + \theta) (\psi z_{2,0} + \chi z_{2,1}) \} \\ - \frac{1}{4} \chi\psi (1 + \frac{1}{6}\chi\psi + \frac{1}{3}\theta\phi) \{ (1 + \chi) (\phi z_{0,2} + \theta z_{1,2}) + (1 + \psi) (\theta z_{1,-1} + \phi z_{0,-1}) \} \\ + \frac{1}{120} \theta\phi (1 + \theta) (1 + \phi) \{ (2 + \phi) (\psi z_{-2,0} + \chi z_{-2,1}) + (2 + \theta) (\chi z_{3,1} + \psi z_{3,0}) \} \\ + \frac{1}{120} \chi\psi (1 + \chi) (1 + \psi) \{ (2 + \psi) (\theta z_{1,-2} + \phi z_{0,-2}) + (2 + \chi) (\phi z_{0,3} + \theta z_{1,3}) \} \\ + \frac{1}{36} \theta\phi\chi\psi (1 + \phi) \{ (1 + \psi) z_{-1,-1} + (1 + \chi) z_{-1,2} \} \\ + \frac{1}{36} \theta\phi\chi\psi (1 + \theta) \{ (1 + \chi) z_{2,2} + (1 + \psi) z_{2,-1} \} \\ \dots\dots (xxii).$$

be found to agree with (xxv) if we put $\theta = \phi = \frac{1}{2}(\chi + \psi)$.
 In a similar way we have to verify that will have none of its ordinates (i.e. interpolants) modified if we transform slide parallel to the "horizontal" or "vertical" of the diagram, Fig. 2 (p. xix). In other words interpolation formulae remain true if we use oblique instead of rectangular axes. All we need to note is the correct values of θ and χ . If θ, ϕ, χ, ψ be the values for rectangular axes and θ', χ' for the oblique axes, all we need for the relation between these values,

which slide along the *Interpolation* in the *Prism* $(0,0), (0,1), (-1,1)(X + \theta)$.

important feature of plane transformation. Taking the argument changes in the original unity θ and χ into the plan P of the interpolate. Instead of the directions AOB and OGD of θ , we propose to take the directions OPB and ACE . We give a uniform slide to the plan of the



that P slides along the *Interpolation* in the *Prism* $(0,0), (0,1), (-1,1)(X + \theta)$. P does the place of the rectangle $OCFB$. No change in the position of the *Interpolation* lines will remain the same. Clearly $\theta' = LP = \theta$, and $\phi' = \psi = \frac{1}{2}(\chi + \psi)$.

$$z_{0,0} = PZ = PL + LK = PL + PL = OL = PL = \chi + \theta,$$

$$z_{0,1} = 1 - z_{1,1} = 1 - (\chi + \psi) = \psi + \theta.$$

difficultly we can find $z_{1,0}$ at P the z 's of the new diagram into the z 's of the table. The diagram $xyin$ will show the relations between the formula z 's and the tabulated values.

must suppose all the formulae $xyin$ to have a dash affixed to them and Fig. 5 will provide tabulated values. To save the reader labour we will repeat formula (xxii) with the dashed z 's the corresponding dashed or tabulated values. No simplicity is obtained by replacing the z 's by their values in terms of θ, χ, ψ , it is best to substitute their numerical values as deduced from the above formulae.

$$z_{0,0} = \theta + \chi, z_{0,1} = \psi + \theta, z_{1,0} = \chi + \psi, z_{1,1} = \psi + \theta \quad \dots\dots(xxiii).$$

in the triangle OPB , i.e. between $z_{0,0}, z_{0,1}$ and $z_{1,1}$.

We have accordingly for $\chi > \theta$ the following:

Formula for Horizontal Slide when the Interpolate lies within the Prism with edges $z_{0,0}, z_{0,1}, z_{1,1} (\chi' > \theta)$.

$$\begin{aligned}
 z_{\theta, \chi} = & \frac{1}{12} \{ (6 + \theta' \phi' + \chi' \psi') (2 + \theta' \phi' + \chi' \psi') + \theta' \phi' \chi' \psi' \} \{ \phi' \psi' z_{0,0} + \phi' \chi' z_{0,1} + \theta' \chi' z_{1,2} + \theta' \psi' z_{1,1} \} \\
 & - \frac{1}{4} \theta' \phi' (1 + \frac{1}{6} \theta' \phi' + \frac{1}{3} \chi' \psi') \{ (1 + \phi') (\psi' z_{-1,-1} + \chi' z_{-1,0}) + (1 + \theta') (\psi' z_{2,2} + \chi' z_{2,3}) \} \\
 & - \frac{1}{4} \chi' \psi' (1 + \frac{1}{6} \chi' \psi' + \frac{1}{3} \theta' \phi') \{ (1 + \chi') (\phi' z_{0,2} + \theta' z_{1,3}) + (1 + \psi') (\theta' z_{1,0} + \phi' z_{0,-1}) \} \\
 & + \frac{1}{120} \theta' \phi' (1 + \theta') (1 + \phi') \{ (2 + \phi') (\psi' z_{-2,-2} + \chi' z_{-2,-1}) + (2 + \theta') (\chi' z_{3,4} + \psi' z_{3,3}) \} \\
 & + \frac{1}{120} \chi' \psi' (1 + \chi') (1 + \psi') \{ (2 + \psi') (\theta' z_{1,-1} + \phi' z_{0,-2}) + (2 + \chi') (\phi' z_{0,3} + \theta' z_{1,4}) \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \phi') \{ (1 + \psi') z_{-1,-2} + (1 + \chi') z_{-1,1} \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \theta') \{ (1 + \chi') z_{2,4} + (1 + \psi') z_{2,1} \} \dots\dots (xxiv).
 \end{aligned}$$

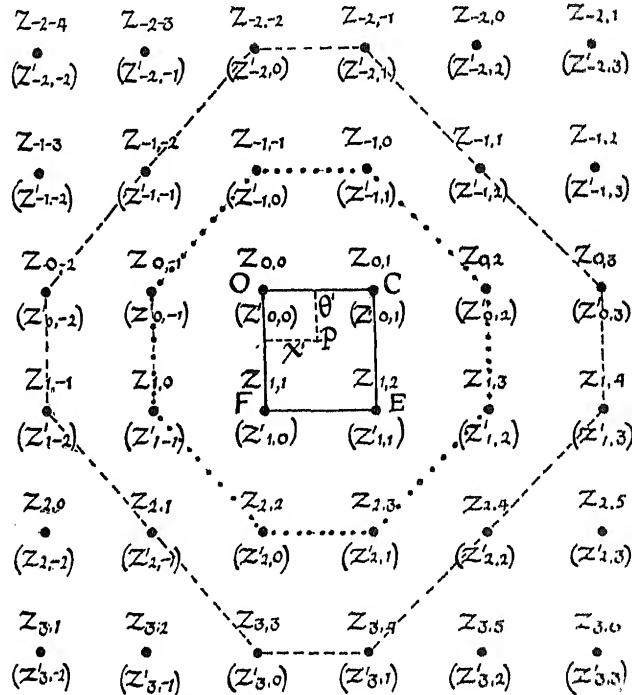


Fig. 5. Horizontal slide for an Interpolate within the prism $z_{0,0}, z_{0,1}, z_{1,1} (\chi' > \theta)$. Interchange of Interpolants.

To test the accuracy with which this formula provides a result we will take a fairly difficult part of the table where we can use a tabulated value, but we will find it from interpolants differing by 1 and not by 0.5. Let us determine $I_{19} (10.5, 11)$.

Here $\theta = \frac{1}{2}$, $\phi = \frac{1}{2}$, $\chi = 1$, $\psi = 0$, and accordingly

$$\theta' = \frac{1}{2}, \quad \phi' = \frac{1}{2}, \quad \chi' = \frac{1}{2}, \quad \psi' = \frac{1}{2}.$$

Thus the numerical coefficients are the same as those of formula (xx), and we have

$$\begin{aligned}
 z_{\theta, \chi} = & \frac{1}{512} \{ 174 (z_{0,0} + z_{0,1} + z_{1,2} + z_{1,1}) - 27 (z_{-1,-1} + z_{-1,0} + z_{2,2} + z_{2,3} + z_{0,2} + z_{1,3} + z_{1,0} + z_{0,-1}) \\
 & + 3 (z_{-2,-2} + z_{-2,-1} + z_{3,4} + z_{3,3} + z_{1,-1} + z_{0,-2} + z_{0,3} + z_{1,4}) + 2 (z_{-1,-2} + z_{-1,1} + z_{2,4} + z_{2,1}) \} \dots\dots (xxiv) bis.
 \end{aligned}$$

While the coefficients in (xxiv) bis are the same as in (xx), the distribution of interpolants is very different. The actual value of $I_{19} (10.5, 11)$ as given by the Tables is $1 - I_{81} (11, 10.5) = 1 - .9989,628 = .0010,372$.

(xxiv) *bis* we have

$$L_{49}(10.5, 11) = \frac{1}{512} [174 \begin{vmatrix} 10,423 \\ 17,309 \\ 10,200 \\ 6,154 \\ 44,086 \end{vmatrix} - 27 \begin{vmatrix} 17,723 \\ 29,498 \\ 3,646 \\ 6,033 \\ 27,450 \\ 16,209 \\ 3,538 \\ 5,949 \\ 110,046 \end{vmatrix} + 3 \begin{vmatrix} 30,279 \\ 50,531 \\ 3,578 \\ 2,166 \\ 1,922 \\ 3,187 \\ 41,825 \\ 24,820 \\ 158,308 \end{vmatrix} + 2 \begin{vmatrix} 10,028 \\ 46,664 \\ 9,602 \\ 2,108 \\ 68,402 \end{vmatrix}]$$

$$\frac{1}{512} [767,0964 - 297,1242 + 474,924 + 136,804]$$

$$= .0010,373|9,$$

for fifth differences we have an error of two in the seventh decimal place.

To take a univariate interpolation for p to find $L_{49}(10.5, 11)$ we have for its values

$$\begin{aligned} &.0010,397|6 \text{ up to fifth differences,} \\ &.0010,372|8 \text{ up to seventh differences,} \\ &.0010,371|3 \text{ up to ninth differences,} \\ &.0010,372|2 \text{ up to eleventh differences,} \end{aligned}$$

is the correct value.

For most practical values the bivariate Lagrangian up to fifth differences is not only easier to use, superior to the univariate Everett formula to the same number of differences; the latter formula gives the correct value with the eleventh differences, but is only a unit out in the seventh decimal place, and needs to either seventh or ninth differences.

There is no doubt of the satisfactory character of (xxiv) for interpolations with six-figure accuracy apart from the table.

Formula for Horizontal Slide when the Interpolate lies within the Prism with edges $z_{0,0}$, $z_{1,1}$, $z_{1,0}$ ($\theta > \chi$).

$$\begin{aligned} &\frac{1}{12} \{ (6 + \theta' \phi' + \chi' \phi') (2 + \theta' \phi' + \chi' \phi') + \theta' \phi' \chi' \phi' \} \{ \phi' \psi' z_{0,-1} + \phi' \chi' z_{0,0} + \theta' \chi' z_{1,1} + \theta' \psi' z_{1,0} \} \\ &+ \frac{1}{4} \theta' \phi' (1 + \frac{1}{6} \theta' \phi' + \frac{1}{6} \chi' \phi') \{ (1 + \phi') (\psi' z_{-1,-2} + \chi' z_{-1,-1}) + (1 + \theta') (\psi' z_{2,1} + \chi' z_{2,2}) \} \\ &+ \frac{1}{4} \chi' \phi' (1 + \frac{1}{6} \chi' \phi' + \frac{1}{6} \theta' \phi') \{ (1 + \chi') (\phi' z_{0,1} + \theta' z_{1,2}) + (1 + \psi') (\theta' z_{1,-1} + \phi' z_{0,-2}) \} \\ &+ \frac{1}{12} \theta' \phi' (1 + \theta') (1 + \phi') \{ (2 + \phi') (\psi' z_{-2,-3} + \chi' z_{-2,-2}) + (2 + \theta') (\chi' z_{3,3} + \psi' z_{3,2}) \} \\ &+ \frac{1}{12} \chi' \phi' (1 + \chi') (1 + \theta') \{ (2 + \chi') (\phi' z_{0,2} + \theta' z_{1,3}) + (2 + \psi') (\theta' z_{1,-2} + \phi' z_{0,-3}) \} \\ &+ \frac{1}{6} \theta' \phi' \chi' \phi' (1 + \phi') \{ (1 + \psi') z_{-1,-3} + (1 + \chi') z_{-1,0} \} \\ &+ \frac{1}{6} \theta' \phi' \chi' \phi' (1 + \theta') \{ (1 + \psi') z_{2,0} + (1 + \chi') z_{2,3} \} \end{aligned} \quad \dots (xxv).$$

$$\theta' = \theta, \phi' = \phi, \chi' = \chi, \psi' = \theta - \chi (\theta > \chi).$$

Formula for Vertical Slide when the Interpolate lies in the Prism $z_{0,0}$, $z_{0,1}$, $z_{1,1}$ ($\chi > \theta$).

In precisely the same manner we may give a vertical instead of a horizontal slide. Which slide will be chosen depends on whether the differences converge more rapidly along the horizontal (or q) direction, or the vertical (or p) direction. And this again may depend on the value of χ .

The nature of the slide is indicated in the figure (Fig. 6) on p. xxx. If the plan P of the interpolate is the triangle $z_{0,0}$, $z_{0,1}$, $z_{1,1}$, then we must slide the parallelogram $z_{-1,0}$, $z_{0,1}$, $z_{1,1}$, $z_{0,0}$ vertically upwards. The vertical side $z_{0,1}$, $z_{1,1}$ takes the place of $z_{-1,1}$, $z_{0,1}$. Of course, every vertical line of the figure to the left of the line $z_{-1,0}$, $z_{0,0}$, $z_{1,0}$, $z_{2,0}$ is slid upwards, and every vertical line to the left downwards, until the left upper to right lower diagonals become horizontal. Clearly this will not change the χ and ψ . Let the new ϕ , or $\phi' = NM = PM = OM = PM = \chi - \theta$, with the condition $\chi > \theta$. Thus we have

$$\theta' = \psi + \theta, \phi' = \chi - \theta, \chi' = \chi, \psi' = \psi.$$

VERTICAL SLIDE INTERPOLATION

On the other hand if the interpolate be at P' within the prism $z_{0,0}, z_{1,1}, z_{1,0}$, we have to deal with the parallelogram $z_{0,0}, z_{1,1}, z_{2,1}, z_{1,0}$ and $z_{2,1}, z_{1,1}$ is shifted vertically upwards so that $z_{2,1}, z_{1,1}$ takes the place of $z_{1,1}, z_{0,1}$. In this case χ and ψ will not be changed by the slide, but the new θ is given by

$$\theta' = P'N' = P'M' - N'M' = \theta - OM' = \theta - \chi$$

and $\phi' = \phi + \chi$. Thus we have with the condition $\theta > \chi$

$$\theta' = \theta - \chi, \quad \phi' = \phi + \chi, \quad \chi' = \chi, \quad \psi' = \psi.$$

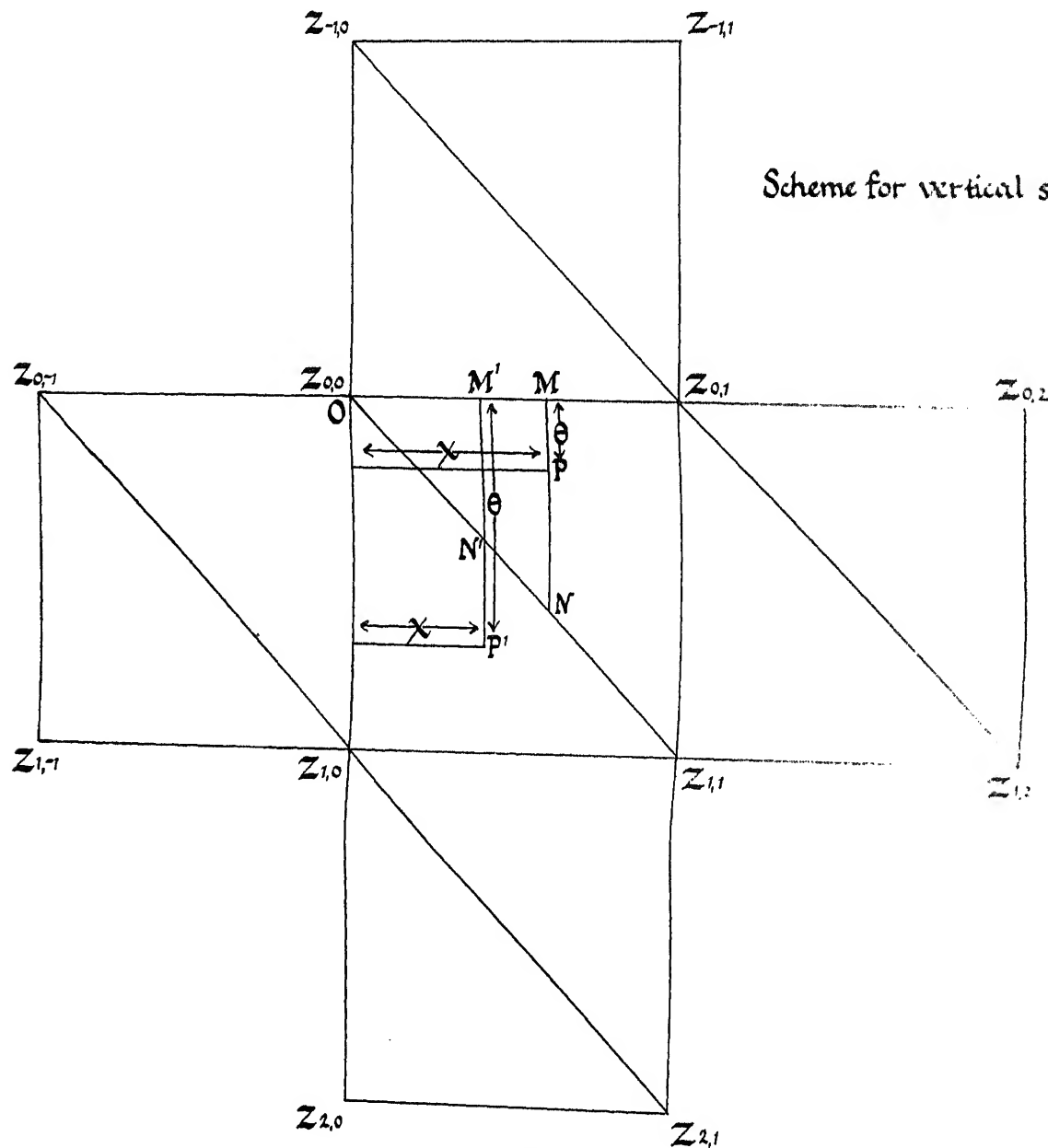


Fig. 6.

If $\theta < \chi$ we have to slide the parallelogram $z_{0,0}, z_{-1,0}, z_{0,1}, z_{1,1}$, so that $z_{0,0}, z_{-1,0}$ remaining stationary $z_{1,1}, z_{0,1}$ take the place of $z_{0,1}, z_{-1,1}$. If $\theta > \chi$ it is the parallelogram $z_{0,0}, z_{1,1}, z_{2,1}, z_{1,0}$ which has to be slid into the rectangle $z_{0,0}, z_{0,1}, z_{1,1}, z_{1,0}$, while $z_{1,0}, z_{0,0}$ remains stationary. Thus no change is made in the subscripts in the vertical through $z_{0,0}$, a change of a unit in the first subscript of z 's on the vertical through $z_{0,1}$, a change of two units in the first subscript of z 's on the vertical through $z_{0,2}$ and so on. From the z 's on verticals to the left of the vertical through $z_{0,0}$, the corresponding changes in the first subscript are negative.

have accordingly the following formulae:

Formula for Vertical Slide when the Interpolate lies within the Prism with edges $z_{0,0}, z_{0,1}, z_{1,1}$ ($\chi > \theta$).

$$\begin{aligned}
 & \frac{1}{12} \{ (6 + \theta' \phi' + \chi' \psi') (2 + \theta' \phi' + \chi' \psi') + \theta' \phi' \chi' \psi' \} \{ \phi' \psi' z_{-1,0} + \phi' \chi' z_{0,1} + \theta' \chi' z_{1,1} + \theta' \psi' z_{0,0} \} \\
 & + \frac{1}{4} \theta' \phi' (1 + \frac{1}{6} \theta' \phi' + \frac{1}{3} \chi' \psi') \{ (1 + \phi') (\psi' z_{-2,0} + \chi' z_{-1,1}) + (1 + \theta') (\psi' z_{1,0} + \chi' z_{2,1}) \} \\
 & + \frac{1}{4} \chi' \psi' (1 + \frac{1}{6} \chi' \psi' + \frac{1}{3} \theta' \phi') \{ (1 + \chi') (\phi' z_{1,2} + \theta' z_{2,2}) + (1 + \psi') (\theta' z_{-1,-1} + \phi' z_{-2,-1}) \} \\
 & + \frac{1}{120} \theta' \phi' (1 + \theta') (1 + \phi') \{ (2 + \phi') (\psi' z_{-3,0} + \chi' z_{-2,1}) + (2 + \theta') (\chi' z_{3,1} + \psi' z_{2,0}) \} \\
 & + \frac{1}{120} \chi' \psi' (1 + \chi') (1 + \psi') \{ (2 + \psi') (\theta' z_{-2,-2} + \phi' z_{-3,-2}) + (2 + \chi') (\phi' z_{2,3} + \theta' z_{3,3}) \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \phi') \{ (1 + \psi') z_{-3,-1} + (1 + \chi') z_{0,2} \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \theta') \{ (1 + \chi') z_{3,2} + (1 + \psi') z_{0,-1} \} \\
 & \theta' = \psi + \theta, \phi' = \chi - \theta, \chi' = \chi, \psi' = \psi.
 \end{aligned}
 \tag{xxvi}.$$

Formula for Vertical Slide when the Interpolate lies within the Prism with edges $z_{0,0}, z_{1,1}, z_{1,0}$ ($\theta > \chi$).

$$\begin{aligned}
 & \frac{1}{12} \{ (6 + \theta' \phi' + \chi' \psi') (2 + \theta' \phi' + \chi' \psi') + \theta' \phi' \chi' \psi' \} \{ \phi' \psi' z_{0,0} + \phi' \chi' z_{1,1} + \theta' \chi' z_{2,1} + \theta' \psi' z_{1,0} \} \\
 & + \frac{1}{4} \theta' \phi' (1 + \frac{1}{6} \theta' \phi' + \frac{1}{3} \chi' \psi') \{ (1 + \phi') (\psi' z_{-1,0} + \chi' z_{0,1}) + (1 + \theta') (\psi' z_{2,0} + \chi' z_{3,1}) \} \\
 & + \frac{1}{4} \chi' \psi' (1 + \frac{1}{6} \chi' \psi' + \frac{1}{3} \theta' \phi') \{ (1 + \chi') (\phi' z_{2,2} + \theta' z_{3,2}) + (1 + \psi') (\theta' z_{0,-1} + \phi' z_{-1,-1}) \} \\
 & + \frac{1}{120} \theta' \phi' (1 + \theta') (1 + \phi') \{ (2 + \phi') (\psi' z_{-2,0} + \chi' z_{-1,1}) + (2 + \theta') (\chi' z_{1,1} + \psi' z_{3,0}) \} \\
 & + \frac{1}{120} \chi' \psi' (1 + \chi') (1 + \psi') \{ (2 + \psi') (\theta' z_{-1,-2} + \phi' z_{-2,-2}) + (2 + \chi') (\phi' z_{3,3} + \theta' z_{4,3}) \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \phi') \{ (1 + \psi') z_{-2,-1} + (1 + \chi') z_{1,2} \} \\
 & + \frac{1}{36} \theta' \phi' \chi' \psi' (1 + \theta') \{ (1 + \chi') z_{4,2} + (1 + \psi') z_{1,-1} \} \\
 & \theta' = \theta - \chi, \phi' = \phi + \chi, \chi' = \chi, \psi' = \psi.
 \end{aligned}
 \tag{xxvii}.$$

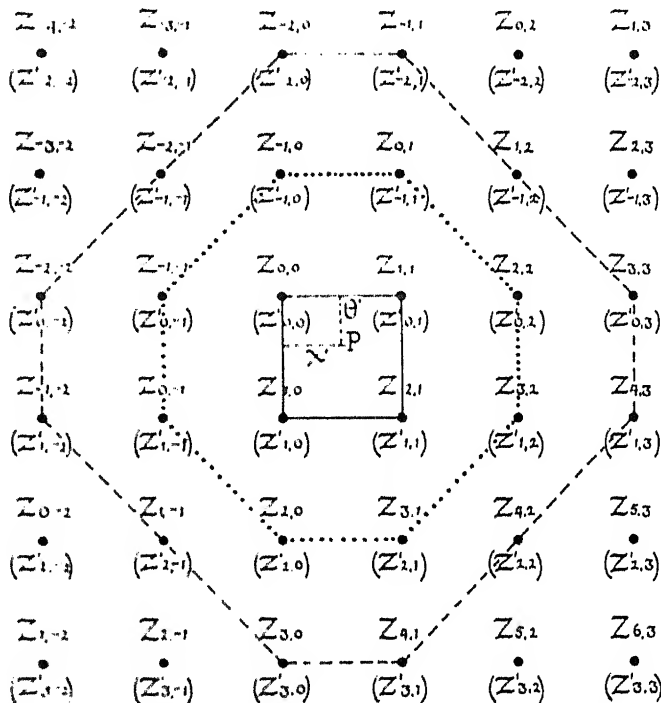


Fig. 7. Vertical slide for an Interpolate within the prism $z_{0,0}, z_{1,1}, z_{1,0}$ ($\theta > \chi$). Interchange of Interpolants.

The user of this table must be careful to distinguish between these formulae and determine before use in which prism the interpolate lies, and whether it will be better to use a horizontal or vertical slide formula. To the illustration of this point we shall devote the following section.

(e) *Comparison of the usual Everett and the new Slide Formulae on a numerical Example.*

We will take values very early in the table and test in this region the accuracy of the various formulae, which can be applied. We have already stated that values in the case of I - and J -curves require a special table for smaller values of the arguments. We choose $p=4.3$ and $q=3.1$ and will determine from the table: $I_{.4}(4.3, 3.1)$ and $I_{.3}(4.3, 3.1)$, the exact values of which are .1586,9761 and .8979,1816 respectively.

Table of Values to be extracted for the Determination of $I_{.4}(4.3, 3.1)$ and $I_{.3}(4.3, 3.1)$ by three Formulae

(—, 13, —) $z_{-2, -3}$ *	(—, 14, 18) $z_{-2, -2}$ *	(—, —, 21) $z_{-2, -1}$ *	(13, —, 13) $z_{-2, 0}$ *	(14, —, —) $z_{-2, 1}$ *		
$I(3, 1.5)$.1169,598 .6958,948	$I(3, 2)$.1792,000 .8192,000	$I(3, 2.5)$.2470,920 .8962,464	$I(3, 3)$.3174,400 .9420,800	$I(3, 3.5)$.3876,349 .9983,731		
(—, 21, —) $z_{-1, -3}$ *	(—, 5, 17) $z_{-1, -2}$ *	(21, 6, 12) $z_{-1, -1}$ *	(5, 22, 5) $z_{-1, 0}$ *	(6, —, 14) $z_{-1, 1}$ *	(22, —, —) $z_{-1, 2}$ *	
$I(3.5, 1.5)$.0781,185 .6446,680	$I(3.5, 2)$.1254,792 .7785,094	$I(3.5, 2.5)$.1803,149 .8671,827	$I(3.5, 3)$.2402,319 .9227,026	$I(3.5, 3.5)$.3029,506 .9561,886	$I(3.5, 4)$.3664,599 .9756,555	
(—, 20, —) $z_{0, -3}$ *	(18, 12, —) $z_{0, -2}$ *	(12, 1, 11) $z_{0, -1}$ *	(1, 2, 1) $z_{0, 0}$ *	(2, 0, 6) $z_{0, 1}$ *	(9, 17, —) $z_{0, 2}$ *	(19, —, —) $z_{0, 3}$ *
$I(4, 1.5)$.0518,937 .5957,189	$I(4, 2)$.0870,400 .7372,800	$I(4, 2.5)$.1299,720 .8361,409	$I(4, 3)$.1792,000 .9011,200	$I(4, 3.5)$.2330,376 .9419,266	$I(4, 4)$.2897,920 .9906,560	$I(4, 4.5)$.3478,813 .9812,185
	(17, 19, —) $z_{1, -2}$ *	(11, 11, 24) $z_{1, -1}$ *	(4, 4, 4) $z_{1, 0}$ *	(3, 3, 2) $z_{1, 1}$ *	(10, 10, 22) $z_{1, 2}$ *	(20, 18, —) $z_{1, 3}$ *
	$I(4.5, 2)$.0599,062 .6960,790	$I(4.5, 2.5)$.0927,180 .8036,071	$I(4.5, 3)$.1320,365 .8774,259	$I(4.5, 3.5)$.1708,111 .9256,723	$I(4.5, 4)$.2258,659 .9560,696	$I(4.5, 4.5)$.2777,227 .9744,984
		(24, —, —) $z_{2, -1}$ *	(7, 23, 7) $z_{2, 0}$ *	(8, 7, 3) $z_{2, 1}$ *	(23, 8, 9) $z_{2, 2}$ *	(—, 24, —) $z_{2, 3}$ *
		$I(5, 2.5)$.0655,576 .7700,249	$I(5, 3)$.0962,560 .8519,680	$I(5, 3.5)$.1325,496 .9075,463	$I(5, 4)$.1736,704 .9437,184	$I(5, 4.5)$.2186,823 .9664,849
			(16, —, 16) $z_{3, 0}$ *	(15, —, 8) $z_{3, 1}$ *	(—, 16, 10) $z_{3, 2}$ *	(—, 15, 19) $z_{3, 3}$ *
			$I(5.5, 3)$.0695,236 .8250,368	$I(5.5, 3.5)$.0983,242 .8876,964	$I(5.5, 4)$.1320,365 .9298,150	$I(5.5, 4.5)$.1700,836 .9571,380
				(—, —, 15) $z_{4, 1}$ *	(—, —, 23) $z_{4, 2}$ *	(—, —, 20) $z_{4, 3}$ *
				$I(6, 3.5)$.0722,568 .8602,899	$I(6, 4)$.0993,526 .9143,583	$I(6, 4.5)$.1308,270 .9464,452

The numbers in the round brackets refer to the order of the corresponding z in the three formulae. The first to the Everett type Formula (xxii), the second to the Horizontal Slide (xxv), and the third to the Vertical Slide (xxvii). A short rule denotes that the z does not occur in the formula.

Usual Bivariate Everett Formula.

We will use first formula (xxi) and the argument difference .5. We have

$$\theta = 3/.5 = .6, \quad \phi = .4, \quad \chi = 1/.5 = .2, \quad \psi = .8.$$

lower figures in the curled brackets refer to $I_8(4.3, 3.1)$. The values of the required interpolants are in the table opposite.

$$\begin{aligned}
 \left. \begin{aligned} I_4(4.3, 3.1) \\ I_8(4.3, 3.1) \end{aligned} \right\} &= 1.2832 \times \left\{ \begin{aligned} &.1605,818|8 \\ &.8959,576|4 \end{aligned} \right\} \\
 &- .0656 \left(1.4 \times \left\{ \begin{aligned} &.2527,756|4 \\ &.9294,478|0 \end{aligned} \right\} + 1.6 \times \left\{ \begin{aligned} &.1035,147|2 \\ &.8630,836|6 \end{aligned} \right\} \right) \\
 &- .0442,6667 \left(1.2 \times \left\{ \begin{aligned} &.2514,003|4 \\ &.9602,681|6 \end{aligned} \right\} + 1.8 \times \left\{ \begin{aligned} &.1076,200|0 \\ &.8166,206|2 \end{aligned} \right\} \right) \\
 &+ .00448 \left(2.4 \times \left\{ \begin{aligned} &.3314,789|8 \\ &.9473,386|2 \end{aligned} \right\} + 2.6 \times \left\{ \begin{aligned} &.0752,837|2 \\ &.8375,687|2 \end{aligned} \right\} \right) \\
 &+ .00288 \left(2.8 \times \left\{ \begin{aligned} &.0707,597|2 \\ &.7125,594|0 \end{aligned} \right\} + 2.2 \times \left\{ \begin{aligned} &.3057,861|4 \\ &.9771,864|4 \end{aligned} \right\} \right) \\
 &+ .0014,9333 \times \left\{ \begin{aligned} &.7643,187|0 \\ &.27317,154|6 \end{aligned} \right\} \\
 &+ .0017,0667 \times \left\{ \begin{aligned} &.3264,081|6 \\ &.25185,069|0 \end{aligned} \right\}.
 \end{aligned}$$

hence we have

$I_4(4.3, 3.1) =$	$I_8(4.3, 3.1) =$
.2060,586|6	1.1496,928|4
-.0340,798|2	-.1759,497|5
-.0219,295|5	-.1160,777|8
+ .0044,409|7	+ .0199,417|8
+ .0025,080|7	+ .0119,375|3
+ .0011,413|8	+ .0040,793|5
+ .0005,570|7	+ .0042,982|6
-.1586,967|8	-.8979,222|3
This is out 8 units in the seventh decimal place.	This is out 4 units in the sixth decimal place.

As these values would be sufficiently accurate for many purposes, it is clear that the usual bivariate formula (xxii), if not taken beyond 8^4 , will not give seven-figure accuracy. We will see what improves if we use the diagonal slide formulae.

Horizontal Slide Formula.

The plan of the interpolate P lies in the rectangle $z_{0,0}, z_{0,1}, z_{1,1}, z_{1,0}$, but below its left to right diagonal, the triangle $z_{0,0}, z_{1,1}, z_{1,0}$. Accordingly the parallelogram for the horizontal slide is $z_{0,-1}, z_{0,0}, z_{1,1}, z_{1,0}$. The formula to be used is (xxv). θ and ϕ remain unchanged but $\chi' = \phi + \chi$, $\psi' = \theta - \chi$, or in our case,

$$\theta' = .6, \quad \phi' = .4, \quad \chi' = .6, \quad \psi' = .4.$$

Substituting we find

$$\begin{aligned}
 z_{\theta, \chi} &= 1.344 \{ .16z_{0,-1} + .24z_{0,0} + .36z_{1,1} + .24z_{1,0} \} \\
 &+ .0672 \{ .56z_{-1,-2} + .84z_{-1,-1} + .64z_{2,1} + .96z_{2,2} \} \\
 &+ .0672 \{ .64z_{0,1} + .96z_{1,2} + .84z_{1,-1} + .56z_{0,-2} \} \\
 &+ .00448 \{ .96z_{-2,-3} + 1.44z_{-2,-2} + 1.56z_{3,3} + 1.04z_{3,2} \} \\
 &+ .00448 \{ 1.04z_{0,2} + 1.56z_{1,3} + 1.44z_{1,-2} + .96z_{0,-3} \} \\
 &+ .00224 \{ 1.4z_{-1,-3} + 1.6z_{-1,0} \} \\
 &+ .00256 \{ 1.4z_{2,0} + 1.6z_{2,3} \}
 \end{aligned}$$

$$\begin{array}{lcl}
z_{\theta, \chi} = 1.344 \left\{ \begin{array}{l} .1591, 4427 | 6 \\ .8938, 7558 | 8 \end{array} \right\} & & = \left\{ \begin{array}{l} .2138, 8990 | 7 \\ 1.2013, 6879 | 0 \end{array} \right\} \\
- .0672 \left\{ \begin{array}{l} .4732, 8819 | 6 \\ 2.6511, 9802 | 8 \end{array} \right\} & & - \left\{ \begin{array}{l} .0318, 0496 | 7 \\ .1781, 6050 | 7 \end{array} \right\} \\
- .0672 \left\{ \begin{array}{l} .4925, 4337 | 6 \\ 2.6085, 0900 | 4 \end{array} \right\} & & - \left\{ \begin{array}{l} .0330, 9891 | 5 \\ .1752, 9180 | 5 \end{array} \right\} \\
+ .00448 \left\{ \begin{array}{l} .7729, 7778 | 4 \\ 4.3078, 4988 | 8 \end{array} \right\} & & + \left\{ \begin{array}{l} .0034, 6294 | 0 \\ .0192, 9916 | 7 \end{array} \right\} \\
+ .00448 \left\{ \begin{array}{l} .8707, 1397 | 2 \\ 4.0997, 8364 | 8 \end{array} \right\} & & + \left\{ \begin{array}{l} .0039, 0079 | 9 \\ .0183, 6703 | 1 \end{array} \right\} \\
+ .00224 \left\{ \begin{array}{l} .4937, 3694 | 0 \\ 2.3789, 5536 | 0 \end{array} \right\} & & + \left\{ \begin{array}{l} .0011, 0597 | 1 \\ .0053, 2886 | 0 \end{array} \right\} \\
+ .00256 \left\{ \begin{array}{l} .4846, 5008 | 0 \\ 2.7391, 2960 | 0 \end{array} \right\} & & + \left\{ \begin{array}{l} .0012, 4070 | 4 \\ .0070, 1217 | 2 \end{array} \right\}
\end{array}$$

the upper figures in the curled brackets referring to $I_4(4.3, 3.1)$ and the lower to $I_8(4.3, 3.1)$. Thus

$$I_4(4.3, 3.1) = .1586, 9644, \quad I_8(4.3, 3.1) = .8979, 2371.$$

The whole labour is small when once the values of the interpolants have been extracted from the B-function ratio table, as in the Table, p. xxxii.

Compared with the actual value the error in $I_4(4.3, 3.1) = -.0000, 0117$, and in $I_8(4.3, 3.1)$, is $+.0000, 0555$, i.e. errors of 1 and 6 in the sixth decimal place.

Vertical Slide Formula.

The interpolate lying in the prism $z_{0,0}, z_{1,1}, z_{1,0}$, i.e. $\theta > \chi$, we need to use formula (xxvii), and accordingly

$$\theta' = .4, \quad \phi' = .6, \quad \chi' = .2, \quad \psi' = .8,$$

and on calculating the θ', χ' coefficients we have

$$\begin{array}{lcl}
z_{\theta, \chi} = 1.2832 \{ .48z_{0,0} + .12z_{1,1} + .08z_{2,1} + .32z_{1,0} \} \\
- .0656 \{ 1.28z_{-1,0} + .32z_{0,1} + 1.12z_{2,0} + .28z_{3,1} \} \\
- .0442, 6666, 67 \{ .72z_{2,2} + .48z_{3,2} + .72z_{0,-1} + 1.08z_{1,-1} \} \\
+ .00448 \{ 2.08z_{-2,0} + .52z_{-1,1} + .48z_{4,1} + 1.92z_{3,0} \} \\
+ .00288 \{ 1.12z_{-1,-2} + 1.68z_{-2,-2} + 1.32z_{3,3} + .88z_{4,3} \} \\
+ .0017, 0666, 67 \{ 1.8z_{-2,-1} + 1.2z_{1,2} \} \\
+ .0014, 9333, 33 \{ 1.2z_{4,2} + 1.8z_{1,-1} \} \\
= 1.2832 \left\{ \begin{array}{l} .1600, 8898 | 0 \\ .8969, 9826 | 8 \end{array} \right\} & & = \left\{ \begin{array}{l} .2054, 2617 | 91 \\ 1.1510, 2817 | 75 \end{array} \right\} \\
- .0656 \left\{ \begin{array}{l} .5174, 0642 | 4 \\ 2.6853, 1179 | 2 \end{array} \right\} & & - \left\{ \begin{array}{l} .0339, 4186 | 14 \\ .1761, 5645 | 34 \end{array} \right\} \\
- \frac{1}{3} (.1328) \left\{ \begin{array}{l} .4767, 4014 | 0 \\ 2.6643, 6721 | 2 \end{array} \right\} & & - \left\{ \begin{array}{l} .0211, 0369 | 69 \\ .1179, 4265 | 53 \end{array} \right\} \\
+ .00448 \left\{ \begin{array}{l} .9859, 7808 | 8 \\ 4.4566, 3428 | 0 \end{array} \right\} & & + \left\{ \begin{array}{l} .0044, 1718 | 18 \\ .0199, 6572 | 16 \end{array} \right\} \\
+ .00288 \left\{ \begin{array}{l} .7812, 3081 | 6 \\ 4.3444, 8046 | 4 \end{array} \right\} & & + \left\{ \begin{array}{l} .0022, 4994 | 48 \\ .0125, 1210 | 37 \end{array} \right\} \\
+ \frac{1}{3} (.00512) \left\{ \begin{array}{l} .7157, 3268 | 0 \\ 2.7604, 5504 | 0 \end{array} \right\} & & + \left\{ \begin{array}{l} .0012, 2151 | 71 \\ .0047, 1117 | 66 \end{array} \right\} \\
+ \frac{1}{3} (.00448) \left\{ \begin{array}{l} .2861, 1552 | 0 \\ 2.5437, 2274 | 0 \end{array} \right\} & & + \left\{ \begin{array}{l} .0004, 2726 | 58 \\ .0037, 9862 | 60 \end{array} \right\}
\end{array}$$

per figures in the curled brackets referring to $I_4(4\cdot3, 3\cdot1)$ and the lower to $I_8(4\cdot3, 3\cdot1)$. Thus

$$I_4(4\cdot3, 3\cdot1) = \cdot1586,9653, \quad I_8(4\cdot3, 3\cdot1) = \cdot8979,1670,$$

errors of $-.0000,0108$ and $+.0000,0146$ respectively.

As for $I_8(4\cdot3, 3\cdot1)$ the Vertical Slide formula gives about one-third of the error of the Everett and one-quarter of the error of the Horizontal Slide formula. In the case of $I_4(4\cdot3, 3\cdot1)$ there is not much difference between the three formulae, they all give an error of about unity in the sixth decimal, but the Vertical Slide appears to be slightly the best.

General Remarks as to Interpolation into the Incomplete B-Function Table.

At the limits of the table for x there may be considerable labour in the work of interpolation, and this is especially so if the values of p or q or both are small. If we suppose x and p have tabled values, but q has not, then as at the limits we have to use forward (or backward) difference formulae, we shall, if we use the Vertical Slide, find we have to proceed to eighth or even ninth differences to obtain a result correct to seven decimal places. On the other hand, if we use $B_x(p, q)$ instead of $I_x(p, q)$ fourth or fifth differences will suffice for seven-figure accuracy. All we need do is to multiply every q -value by the complete B-function, $B(p, q)$, placed at the head of the column of the table, whence $I_x(p, q)$ is drawn. When the result has been obtained for $B_x(p, q)$ we need to find $B(p, q)$, as q will be the interpolate value, and $B(p, q)$ is not tabled. This must be done from tables of the complete Γ -function*. But even thus trouble may arise when we need a value as $I_{\cdot90}(0\cdot5, 3\cdot25)$, even if we reduce our I_x -values to B_x -values. If we use the *twelfth* forward difference for $I_x(p, q)$ † we shall be in error by more than unity in the fifth decimal place. If we use $B_x(p, q)$ to the *twelfth* difference we shall be in error by less than unity in the sixth decimal place. This may be satisfactory from the mathematician's standpoint, but far fewer differences will satisfy the statistician seeking merely for four or even three decimal place accuracy.

We can, however, proceed in a very simple way to get rapidly converging differences. We have

$$I_{\cdot90}(0\cdot5, 3\cdot25) = 1 - I_{\cdot10}(3\cdot25, 0\cdot5),$$

so we require $I_{\cdot10}(3\cdot25, 0\cdot5)$. Now if it is p we wish to interpolate for, let us interpolate for $x^{-(p-1)}I_x(p, q)$ for $(\cdot10)^{-p-1}I_{\cdot10}(3\cdot25, 0\cdot5)$ in our case. We have, omitting 10^{-7} in the third and fourth columns:

p	$I_{\cdot10}(p, 0\cdot5)$	$I_{\cdot10}(p, 0\cdot5) \times (\cdot10)^{-(p-1)}$	$I_{\cdot10}(p, 0\cdot5) \times (\cdot10)^{-(p-1)}$
3	$\cdot000,3250$	$(\cdot10)^{-2} \times 3250$	$(\cdot10)^{-2} \times 3250$
3.5	$\cdot000,0958$	$(\cdot10)^{-2} \times (\cdot10)^{-\frac{1}{2}} \times 958$	$(\cdot10)^{-2} \times 3029$
4	$\cdot000,0285$	$(\cdot10)^{-2} \times (\cdot10)^{-1} \times 285$	$(\cdot10)^{-2} \times 2850$
4.5	$\cdot000,086$	$(\cdot10)^{-2} \times (\cdot10)^{-1\frac{1}{2}} \times 86$	$(\cdot10)^{-2} \times 2720$

so $(\cdot10)^{-\frac{1}{2}} \times 3\cdot1622,777$ and $(\cdot10)^{-1\frac{1}{2}} \times 31\cdot6227,77$, hence the fourth column. We now take the forward differences of the fourth column:

	Δ	Δ^2	Δ^3
3250			
3029	-221		
2850	-179	$+42$	
2720	-130	$+49$	7

so we have, reinstating the 10^{-7} :

$$\begin{aligned} I_{\cdot10}(3\cdot25, 0\cdot5) \times (\cdot10)^{-2\frac{1}{2}} &= (\cdot10)^{-2} \{ \cdot0003,250 + \frac{1}{4} (-\cdot0000,221) - \frac{3}{32} (\cdot0000,042) + \frac{7}{128} (\cdot0000,007) \} \\ &= (\cdot10)^{-2} \times \cdot0003,190|43, \\ I_{\cdot10}(3\cdot25, 0\cdot5) &= (\cdot10)^{2\frac{1}{2}} \times \cdot0003,190|43 \\ &= \cdot562341 \times \cdot0003,190|43 \\ &= \cdot0001,794. \end{aligned}$$

Accordingly $I_{\cdot90}(0\cdot5, 3\cdot25) = \cdot9998,206$.

For *acts for Computers*, No. III, Legendre's table, $\text{Log } \Gamma(p)$ to twelve places, for $p=1$ to 2, argument intervals $\cdot001$; No. VIII, Pearson's table, $\text{Log } \Gamma(p)$ to ten places, for $p=2$ to 1200, argument intervals $0\cdot5, 1$ and 2 ; No. IX, Brownlee's table, $\text{Log } \Gamma(p)$ to 5000 by intervals of $\cdot01$.

If we proceed by central differences we have $I_{\cdot90}(0\cdot5, 3\cdot25) = 1 - I_{\cdot10}(3\cdot25, 0\cdot5)$, and the δ^2 's diverge rapidly. Thus for $p=3$, $\delta^2 = \cdot05,002$, $\delta^4 = \cdot0010,202$, $\delta^6 = \cdot0020,423$, $\delta^8 = \cdot0049,637$, $\delta^{10} = \cdot0180,511$, etc., and the reduction of the coefficients hardly keeps up with this divergence. The forward differences here escape this trouble although their convergence is relatively slow.

Thus with the additional trouble of computing two roots of $\cdot 10$ we have obtained a result with two or three forward differences, where the $I_x(p, q)$ function required a dozen. This method will often be markedly successful in interpolating for x when p and q are given by table values. Thus suppose we desire

$$I_{.8966}(0.5, 3.5) = 1 - I_{.1034}(3.5, 0.5).$$

Extracting the values from the table:

(a)	(b) $p=3.5$ $q=0.5$	(c) $x^{-2.5}$	(d) $(b) \times (c)$	Δ	Δ^2
$x=.10$	.0000,958	316.2278	.0003,029|46	319|56	0|21
$x=.11$	.0001,344	249.1829	.0003,349|02	319|35	
$x=.12$	.0001,830	164.1125	.0003,668|37		

Linear interpolation is therefore sufficient, or

$$I_{.1034}(3.5, 0.5) \times \frac{(.1034)^{-2.5}}{100} = 2.9087 \{ (.0003,029|46) \times .66 + (.0003,349|02) \times .34 \} = .0003,138|11,$$

or

$$I_{.1034}(3.5, 0.5) \times 2.9087 = .0003,138|11,$$

and accordingly

$$I_{.1034}(3.5, 0.5) = .0001,079$$

and

$$I_{.8966}(0.5, 3.5) = .9998,921.$$

In escaping with a single difference, however, we have had to compute four power terms.

(7) Applications.

(i) *The Incomplete B-Function Tables may be applied to calculate the Sum of any Number of Terms of a Hypergeometrical Series $F(\alpha, \beta, \gamma, x)$ of which the fourth element x is unity.*

Illustration 5. Calculate the sum of the last 51 terms of $F(1, -60, -65, 1)$.

If $\epsilon = \gamma - \alpha - \beta - 1$, and supposing the terms of the series spaced at unity apart, the moments about an origin 0.5 before the first term are*

$$\mu_1' = \alpha\beta/\epsilon = 9.0714,2857 \text{ in our case,}$$

$$\mu_2' = \frac{\alpha\beta(\alpha+\epsilon)(\beta+\epsilon)}{\epsilon^2(\epsilon-1)} = 143.8214,2857 \text{ in our case,}$$

$$\mu_3' = \frac{\alpha\beta(\alpha+\epsilon)(\beta+\epsilon)(2\alpha+\epsilon)(2\beta+\epsilon)}{\epsilon^3(\epsilon-1)(\epsilon-2)} = 3041.1964,2857 \text{ in our case.}$$

But these are the moments of the discrete ordinates, and our curve by which we replace them must have corrections applied to these moments. In most cases Sheppard's corrections will suffice, but in the present case the first term is the maximum term. There is, however, high contact at the second terminal. The above raw moments were kindly corrected for abruptness† by Dr O. L. Davies, and he found the following values:

$$\mu_1' = 9.063,5495, \quad \mu_2' = 143.738,0331, \quad \mu_3' = 3038.952,2009.$$

These values are slightly below those due to using merely Sheppard's corrections in the first two cases and slightly above in the third case.

To fit a curve starting at 0.5 before the first term of the hypergeometrical series of the form

$$y = y_0 x^{p-1} (b-x)^{q-1}$$

and having the same three moment coefficients, we must calculate the values of $\lambda_1 = \mu_1'/\mu_2'$ and $\lambda_2 = \mu_2'\mu_1'/\mu_3'$; we find for our series

$$\lambda_1 = .5715,1143|52 \text{ and } \lambda_2 = .4286,9275|04.$$

The values of p and q are provided by‡

$$p = \frac{2(\lambda_1 - \lambda_2)}{1 + \lambda_2 - 2\lambda_1} = \frac{.2856,3736|96}{.2856,6988|00} = .9998,8620,$$

$$p+q = \frac{2(\lambda_1 - \lambda_2)}{2\lambda_2 - \lambda_1 - \lambda_1\lambda_2} = \frac{.2856,3736|96}{.0408,7125|69} = 6.9887,1019,$$

$$q = 5.9888,2399.$$

* Pearson, *Phil. Mag.* Feb. 1899, p. 239.

† *Phil. Trans.* Vol. 186 (1895) A, p. 371, with a different notation and correction of the slip in the value of b , the range.

‡ *Tables for Statisticians*, Part II, p. cxciv.

range b is given by

$$b = \frac{\mu_1' (1 + \lambda_2 - 2\lambda_1)}{2\lambda_2 - \lambda_1 - \lambda_1\lambda_2} = \mu_1' \frac{.2856,6988|00}{.0408,7125|69},$$

$$= 63.349,730.$$

the equation to the curve representing our hypergeometrical series $F(1, -60, -65, 1)$ is

$$y = y_0 x^{.000,1138} (63.349,730 - x)^{4.988,824}.$$

actual range of the hypergeometrical series is 61, but as the 60th term is .000,001 and the 61st .000,000, the range is very reasonable, the areas of the curve and the last six terms of the series agreeing exactly in decimal figures.

we now to find from the B-function table the sum of the last 51 terms as a proportion of the whole. This will be given by the incomplete B-function ratio. We have the required sum, \bar{S} , as approximately*

$$\bar{S} = y_0 \int_0^{63.349,730} x^{-.000,1138} (63.349,730 - x)^{4.988,824} dx.$$

put $x = 63.349,730x'$, and let S' be the ratio to the total area, then

$$S' = 1 - I_{.142,0085}(.999,8862, 5.988,8240) \\ = I_{.857,0315}(5.988,824, .999,8862),$$

is the value to be found from the table.

to obtain a fairly close approximation to this we must revert to our trivariate interpolation formula

above, remembering that the interval for x is .01, and for p and q at this part of the table .5,

$$\theta_1 = .79315, \quad \phi_1 = .977648, \quad \chi_1 = .999,7724.$$

It will be adequate to take these to five decimals, or

$$\theta_1 = .79315, \quad \phi_1 = .97765, \quad \chi_1 = .99977,$$

accordingly

$$\theta_0 = .20685, \quad \phi_0 = .02235, \quad \chi_0 = .00023.$$

With these values we obtain the triple products

$$\begin{aligned} \theta_0 \phi_0 \chi_0 &= .0000,0107, & \theta_0 \phi_0 \chi_1 &= .0046,2203, \\ \theta_1 \phi_0 \chi_0 &= .0000,0408, & \theta_1 \phi_0 \chi_1 &= .0177,2282, \\ \theta_1 \phi_1 \chi_0 &= .0001,7835, & \theta_1 \phi_1 \chi_1 &= .7752,4475, \\ \theta_0 \phi_1 \chi_0 &= .0000,4651, & \theta_0 \phi_1 \chi_1 &= .2021,8039. \end{aligned}$$

Now turn to the needful z 's and $\delta^2 z$'s,

$$\begin{aligned} z_{000} &= .1910,543, & z_{100} &= .2078,455, & z_{110} &= .1875,144, & z_{010} &= .1712,665, \\ z_{001} &= .4090,761, & z_{101} &= .4362,561, & z_{111} &= .4045,672, & z_{011} &= .3771,495. \end{aligned}$$

Now we find the hyperbolic terms of the interpolation formula (viii) on p. x give us .3995,5574 for the value of S' . The exact value is .3993,917. It remains to be seen how the terms in $\delta^2 z$ will modify the value deduced from the hyperbolic terms. We have

$$\begin{aligned} \frac{1}{6} \theta_1 (1 + \theta_0) &= .1595,3552, & \frac{1}{6} \theta_0 (1 + \theta_1) &= .0618,1885, \\ \frac{1}{6} \phi_1 (1 + \phi_0) &= .1665,8340, & \frac{1}{6} \phi_0 (1 + \phi_1) &= .0073,6740, \\ \frac{1}{6} \chi_1 (1 + \chi_0) &= .1666,6705, & \frac{1}{6} \chi_0 (1 + \chi_1) &= .0000,7585. \end{aligned}$$

hence

$$\begin{aligned} \delta_x^2 z_{000} &= .0013,884, & \delta_p^2 z_{000} &= .0027,147, & \delta_q^2 z_{000} &= 1.0269,675, \\ \delta_x^2 z_{100} &= .0015,462, & \delta_p^2 z_{100} &= .0026,546, & \delta_q^2 z_{100} &= 1.0205,651, \\ \delta_x^2 z_{010} &= .0014,310, & \delta_p^2 z_{010} &= .0023,161, & \delta_q^2 z_{010} &= 1.0346,165, \\ \delta_x^2 z_{110} &= .0015,996, & \delta_p^2 z_{110} &= .0022,745, & \delta_q^2 z_{110} &= 1.0295,384, \\ \delta_x^2 z_{001} &= .0014,015, & \delta_p^2 z_{001} &= .0027,126, & \delta_q^2 z_{001} &= -.0261,785, \\ \delta_x^2 z_{101} &= .0014,600, & \delta_p^2 z_{101} &= .0024,820, & \delta_q^2 z_{101} &= -.0261,785, \\ \delta_x^2 z_{011} &= .0015,662, & \delta_p^2 z_{011} &= .0024,918, & \delta_q^2 z_{011} &= -.0243,282. \end{aligned}$$

do not need to find y_0 . If we did then we should make the area of the curve equal to the sum of the hypergeometrical series, i.e.

$$\text{Sum} = \frac{\Gamma(\epsilon - \gamma + 1) \Gamma(\beta - \gamma + 1)}{\Gamma(\epsilon + \beta - \gamma + 1) \Gamma(1 - \gamma)}, \text{ if } \epsilon < 0, \quad = \frac{\Gamma(\gamma) \Gamma(\gamma - \alpha - \beta)}{\Gamma(\gamma - \alpha) \Gamma(\gamma - \beta)}, \text{ if } \epsilon > 0.$$

In the present case the value of ϵ is < 0 , and the Sum = $(\Gamma(.67) \Gamma(.6)) / (\Gamma(.7) \Gamma(.66)) = 11$.

The limiting value of $I_x(p, q)$, as $q \rightarrow 0$, is unity.

Accordingly, if S_{δ^2} be the $\delta^2 z$ terms in (viii), we have

$$S_{\delta^2} = -0.000,5156 - 0.000,8028 - 0.000,0942 - 0.000,1686 - 0.000,3950 + 0.000,1737 \\ = -0.001,8025.$$

Hence, including the hyperbolic term, we have for the total area up to and including third differences 3993.755. Accordingly our results differ from the sum of the 51 terms of the series by less than two units (1.6) in the fifth place of decimals, a result close enough for many statistical purposes. Actually the interpolate differs more from the true value of the curve area ratio* than it does from the sum of the 51 terms of the series.

We cannot get a better value for the interpolate without going to higher differences than the third, but to do this would involve excessive labour, while the divergence of the partial area of the Pearson curve from the sum of n terms of the series is of the same order as the divergence of the partial area from a third difference interpolate into the table.

(ii) *On a Method of determining the Probability that the Correlation Coefficient r in a sample of size n from a Normal Population with correlation ρ will not exceed the value r ; that is, to find the Probability Integral of r .*

If σ_1, σ_2 be the standard deviations of the two variates in the sample, the correlation between which is r , and Σ_1, Σ_2 the corresponding standard deviations in the parent population, then the correlation surface of r, σ_1, σ_2 , as was originally shown by Fisher†, is

$$z = z_0 e^{-\frac{1}{2} \frac{n}{1-\rho^2} \left(\frac{\sigma_1^2}{\Sigma_1^2} - \frac{2r\rho\sigma_1\sigma_2}{\Sigma_1\Sigma_2} + \frac{\sigma_2^2}{\Sigma_2^2} \right)} \left(\frac{\sigma_1}{\Sigma_1} \right)^{n-2} \left(\frac{\sigma_2}{\Sigma_2} \right)^{n-2} (1-r^2)^{\frac{n-4}{2}} \quad \dots\dots(\text{xxxviii}),$$

where the element of volume is $d\sigma_1 d\sigma_2 dr$, and

$$z_0 = \frac{N n^{n-1}}{\Gamma\left(\frac{n-2}{2}\right) \Gamma\left(\frac{n-1}{2}\right) \sqrt{\pi} (1-\rho^2)^{\frac{1}{2}(n-1)} 2^{n-3} \Sigma_1 \Sigma_2} \quad \dots\dots(\text{xxxix}).$$

Expand $e^{-\frac{1}{2} \frac{n}{1-\rho^2} \left(\frac{\sigma_1^2}{\Sigma_1^2} - \frac{2r\rho\sigma_1\sigma_2}{\Sigma_1\Sigma_2} + \frac{\sigma_2^2}{\Sigma_2^2} \right)}$ by the Exponential Theorem and we have

$$z = z_0 e^{-\frac{1}{2} \frac{n}{1-\rho^2} \left(\frac{\sigma_1^2}{\Sigma_1^2} - \frac{2r\rho\sigma_1\sigma_2}{\Sigma_1\Sigma_2} + \frac{\sigma_2^2}{\Sigma_2^2} \right)} = \sum_{t=0}^{\infty} \left(\frac{n}{1-\rho^2} \right)^t (r\rho)^t \frac{1}{t!} \left(\frac{\sigma_1}{\Sigma_1} \frac{\sigma_2}{\Sigma_2} \right)^{n+t-2} (1-r^2)^{\frac{n-4}{2}}.$$

Take

$$u = \frac{1}{2} \frac{n}{1-\rho^2} \frac{\sigma_1^2}{\Sigma_1^2}, \quad v = \frac{1}{2} \frac{n}{1-\rho^2} \frac{\sigma_2^2}{\Sigma_2^2}.$$

Substituting, and integrating out for u and v by aid of the complete Γ -function we find

$$z = \frac{N (1-\rho^2)^{\frac{n-1}{2}}}{\sqrt{\pi} \Gamma\left(\frac{1}{2}(n-2)\right) \Gamma\left(\frac{1}{2}(n-1)\right)} \sum_{t=0}^{\infty} \frac{(2r\rho)^t}{t!} \Gamma^2\left(\frac{1}{2}(n+t-1)\right) (1-r^2)^{\frac{n-4}{2}} \quad \dots\dots(\text{xxx}),$$

for the distribution curve of r .

To obtain the probability integral, we have $\frac{1}{2}(1+\alpha_r) = \int_{-1}^r \frac{z dr}{N}$. Now $\frac{z}{N}$ may be taken to consist of two series $\phi_1(r^2)$ corresponding to the even powers of r , and $r\phi_2(r^2)$ to the odd powers of r . It is clear that only the latter will change sign with r .

Now let us write $r^2 = u$, then

$$\int_{-1}^r \frac{z dr}{N} = \frac{1}{2}(1+\alpha_r) = \frac{(1-\rho^2)^{\frac{n-1}{2}}}{\sqrt{\pi} \Gamma\left(\frac{1}{2}(n-2)\right) \Gamma\left(\frac{1}{2}(n-1)\right)} (S_1 + S_2),$$

where

$$S_1 = \int_{-1}^{r^2} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma^2\left(\frac{1}{2}(n-1)+s\right) (1-u)^{\frac{n-4}{2}} \frac{1}{2} u^{\frac{2s-1}{2}} du \\ = \int_{-1}^0 + \int_0^{r^2} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma^2\left(\frac{1}{2}(n-1)+s\right) u^{s-\frac{1}{2}} \frac{1}{2} (1-u)^{\frac{n-4}{2}} du.$$

3993.494 by quadrature.

† *Biometrika*, Vol. x, pp. 507 et seq.

$\int_0^{r^2} u^{s-\frac{1}{2}}(1-u)^{\frac{n-4}{2}} du$ is the incomplete B-function $B_{r^2}\left(s+\frac{1}{2}, \frac{n-2}{2}\right)$, and this equals

$$I_{r^2}\left(s+\frac{1}{2}, \frac{n-2}{2}\right) \times B\left(s+\frac{1}{2}, \frac{n-2}{2}\right),$$

$I_{r^2}\left(s+\frac{1}{2}, \frac{n-2}{2}\right)$ is the incomplete B-function ratio, and $B\left(s+\frac{1}{2}, \frac{n-2}{2}\right)$ the complete B-function as

$$B\left(s+\frac{1}{2}, \frac{n-2}{2}\right) = \Gamma\left(s+\frac{1}{2}\right) \Gamma\left(\frac{n-2}{2}\right) / \Gamma\left(\frac{1}{2}(n-1)+s\right).$$

or since S_1 depends only on r^2 we have the integral from -1 to 0 equals the integral from 0 to 1 , or

$$I_1\left(s+\frac{1}{2}, \frac{n-2}{2}\right) = 1 \text{ for all values of } S,$$

$$\begin{aligned} & \frac{1}{2} S_1 \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma\left(s+\frac{1}{2}\right) \Gamma\left(\frac{n-2}{2}\right) \Gamma\left(\frac{1}{2}(n-1)+s\right) \\ & + \frac{1}{2} S_2 \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma\left(s+\frac{1}{2}\right) \Gamma\left(\frac{n-2}{2}\right) \Gamma\left(\frac{1}{2}(n-1)+s\right) I_{r^2}\left(s+\frac{1}{2}, \frac{n-2}{2}\right) \quad \dots\dots(\text{xxxix}). \end{aligned}$$

the contribution of $\phi(r^2)$ to $\int_{-1}^r \frac{z}{N} dr$ is

$$\begin{aligned} & \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \frac{1}{\sqrt{\pi} \Gamma\left(\frac{1}{2}(n-1)\right)} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma\left(s+\frac{1}{2}\right) \Gamma\left(\frac{1}{2}(n-1)+s\right) \\ & + \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \frac{1}{\sqrt{\pi} \Gamma\left(\frac{1}{2}(n-1)\right)} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s}}{(2s)!} \Gamma\left(s+\frac{1}{2}\right) \Gamma\left(\frac{1}{2}(n-1)+s\right) I_{r^2}\left(s+\frac{1}{2}, \frac{n-2}{2}\right). \end{aligned}$$

the first of these series reduces to

$$\begin{aligned} & \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \frac{1}{\sqrt{\pi}} \left(\Gamma\left(\frac{1}{2}\right) + \frac{4\rho^2}{2!} \Gamma\left(\frac{3}{2}\right) \frac{1}{2}(n-1) + \frac{16\rho^4}{4!} \Gamma\left(\frac{5}{2}\right) \frac{1}{2}(n+1) \frac{1}{2}(n-1) + \dots \right) \\ & = \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \left(1 + \frac{1}{2}(n-1)\rho^2 + \frac{1}{2!}(n-1)\frac{1}{2}(n+1)\rho^4 + \dots \right) \\ & = \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \times (1-\rho^2)^{-\frac{n-1}{2}} = \frac{1}{2}. \end{aligned}$$

second of the above series may be written

$$\frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \left(I_{r^2}\left(\frac{1}{2}, \frac{n-2}{2}\right) + \frac{\rho^2}{1!} \frac{n-1}{2} I_{r^2}\left(\frac{3}{2}, \frac{n-2}{2}\right) + \frac{\rho^4}{2!} \frac{n-1}{2} \frac{n+1}{2} I_{r^2}\left(\frac{5}{2}, \frac{n-2}{2}\right) + \dots \right)$$

$$I_r(p, q) = 1 - I_{1-r}(q, p),$$

$$\frac{1}{2} - \frac{1}{2} (1-\rho^2)^{\frac{n-1}{2}} \sum_{s=0}^{\infty} \frac{\rho^{2s} I_{1-r^2}\left(\frac{n-2}{2}, s+\frac{1}{2}\right)}{s B\left(\frac{n-1}{2}, s\right)}, \quad \dots\dots(\text{xxxii}).$$

advantage of this form is that the values of $I_{1-r^2}\left(\frac{n-2}{2}, s+\frac{1}{2}\right)$ and $B\left(\frac{n-1}{2}, s\right)$ are directly given

Tables of the Incomplete B-Function.

Thus we have finally

$$\int_{-1}^r \phi(r^2) dr = 1 - \frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}} \sum_{s=0}^{\infty} \frac{\rho^{2s} I_{1-r^2} \left(\frac{n-2}{2}, s + \frac{1}{2} \right)}{s B \left(\frac{n-1}{2}, s \right)} \quad \dots\dots(\text{xxxi}).$$

We now turn to the second part of the integral of $\frac{z}{N}$, i.e.

$$\int_{-1}^r r \phi(r^2) dr = \int_{-1}^0 + \int_0^r r \phi(r^2) dr.$$

Now

$$\int_0^r r \phi(r^2) dr = \frac{(1 - \rho^2)^{\frac{n-1}{2}}}{\sqrt{\pi} \Gamma \left(\frac{1}{2}(n-2) \right) \Gamma \left(\frac{1}{2}(n-1) \right)} \int_0^r S_2 dr,$$

where

$$S_2 = \sum_{s=0}^{\infty} \frac{(2\rho)^{2s+1}}{(2s+1)!} \Gamma^2 \left(\frac{1}{2}(n+2s) \right) r^{2s+1} (1 - r^2)^{\frac{n-4}{2}}.$$

Put $u = r^2$ as before and we have

$$\begin{aligned} \int_0^r S_2 du &= \frac{1}{2} \int_0^r \sum_{s=0}^{\infty} \frac{(2\rho)^{2s+1}}{(2s+1)!} \Gamma^2 \left(\frac{1}{2}n + s \right) u^s (1-u)^{\frac{n-4}{2}} du \\ &= \frac{1}{2} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s+1}}{(2s+1)!} \Gamma^2 \left(\frac{1}{2}n + s \right) B_{r^2} \left(s+1, \frac{n-2}{2} \right) \\ &= \frac{1}{2} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s+1}}{(2s+1)!} \Gamma^2 \left(\frac{1}{2}n + s \right) I_{r^2} \left(s+1, \frac{n-2}{2} \right) B \left(s+1, \frac{n-2}{2} \right) \\ &= \frac{1}{2} \sum_{s=0}^{\infty} \frac{(2\rho)^{2s+1}}{(2s+1)!} \Gamma^2 \left(\frac{1}{2}n + s \right) I_{r^2} \left(s+1, \frac{n-2}{2} \right) \frac{\Gamma(s+1) \Gamma \left(\frac{1}{2}(n-2) \right)}{\Gamma \left(\frac{1}{2}n + s \right)}, \end{aligned}$$

or introducing the factor we have

$$\int_0^r r \phi(r^2) dr = \frac{\frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}}}{\sqrt{\pi} \Gamma \left(\frac{1}{2}(n-1) \right)} \sum_{s=0}^{\infty} \frac{\Gamma \left(\frac{1}{2}n + s \right) \Gamma(s+1)}{(2s+1)!} (2\rho)^{2s+1} I_{r^2} \left(s+1, \frac{n-2}{2} \right).$$

Now change $I_{r^2} \left(s+1, \frac{n-2}{2} \right)$ as before, and remembering that $\int_{-1}^0 r \phi(r^2) dr$ will equal $\int_0^1 r \phi(r^2) dr$, we see that

$$\begin{aligned} \int_{-1}^r r \phi(r^2) dr &= \frac{\frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}}}{B \left(\frac{1}{2}, \frac{n-1}{2} \right)} \sum_{s=0}^{\infty} \frac{\Gamma \left(\frac{1}{2}n + s \right) \Gamma(s+1)}{\Gamma \left(\frac{1}{2}n \right) \Gamma(2s+2)} (2\rho)^{2s+1} I_{1-r^2} \left(\frac{n-2}{2}, s+1 \right) \\ &= \frac{\frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}}}{B \left(\frac{1}{2}, \frac{n-1}{2} \right)} \sum_{s=0}^{\infty} \frac{B \left(\frac{1}{2}n + s, s+1 \right) (2\rho)^{2s+1}}{B \left(\frac{1}{2}n, 2s+2 \right) \left(\frac{1}{2}n + 2s+1 \right)} I_{1-r^2} \left(\frac{n-2}{2}, s+1 \right) \quad \dots\dots(\text{xxxiv}). \end{aligned}$$

This is a convenient form as the complete B-functions are tabled as well as $I_{1-r^2} \left(\frac{n-2}{2}, s+1 \right)$.

(iii) Thus finally we have the result

$$\begin{aligned} \frac{1}{2} (1 + \alpha_r) &= 1 - \frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}} \sum_{s=0}^{\infty} \frac{\rho^{2s} I_{1-r^2} \left(\frac{n-2}{2}, s + \frac{1}{2} \right)}{s B \left(\frac{n-1}{2}, s \right)} \\ &\quad - \frac{\frac{1}{2} (1 - \rho^2)^{\frac{n-1}{2}}}{B \left(\frac{n-1}{2}, \frac{1}{2} \right)} \sum_{s=0}^{\infty} \frac{B \left(\frac{1}{2}n + s, s+1 \right) (2\rho)^{2s+1} I_{1-r^2} \left(\frac{n-2}{2}, s+1 \right)}{B \left(\frac{1}{2}n, 2s+2 \right) \left(\frac{1}{2}n + 2s+1 \right)} \quad \dots\dots(\text{xxxv}). \end{aligned}$$

chief trouble is the slow convergency of the two series. But the values of the factors are easily obtained by machine by continuous multiplication. Representing the first series by

$$\Sigma_1 = \sum_{s=0}^{\infty} f_{2s} \times I_{1-\rho^2} \left(\frac{n-2}{2}, s + \cdot 5 \right),$$

$$f_{2(s+1)} = f_{2s} \times \frac{2s+n-1}{2s+2} \rho^2 \quad \text{.....(xxxvi).}$$

and, if the second series be

$$\Sigma_2 = \sum_{s=0}^{\infty} F_{2s+1} \times I_{1-\rho^2} \left(\frac{n-2}{2}, s + 1 \right)$$

$$F_{2(s+1)+1} = F_{2s+1} \times \frac{2s+n}{2s+3} \rho^2 = F_{2s+1} \times \frac{2s+1+n-1}{2s+1+2} \rho^2 \quad \text{.....(xxxvii).}$$

where $I_{1-\rho^2} \left(\frac{n-2}{2}, s + \cdot 5 \right)$ and $I_{1-\rho^2} \left(\frac{n-2}{2}, s + 1 \right)$ are always less than unity and often considerably less than unity, we see that both series ultimately converge more rapidly than a geometrical series of radix ρ^2 . For all values of ρ , the convergency is rapid. It will be seen that the incomplete B-function ratios required for $I_x(p, q)$ only for whole numbers, or for whole numbers plus 0.5. Such values are given in our table for p and q up to 10.5 each. Further we have directly tabled p or q up to 10.5 and q or p up to 50. Cases where p is an integer and $q > 10.5$ or *vice versa* require an interpolation formula. This is adequately supplied by

$$z_{s+1} = \frac{1}{2}(z_s + z_{s+1}) - \frac{1}{16}(\delta^2 z_s + \delta^2 z_{s+1}) + \frac{3}{256}(\delta^4 z_s + \delta^4 z_{s+1}) - \frac{5}{2048}(\delta^6 z_s + \delta^6 z_{s+1}) \quad \text{.....(xxxviii).}$$

The last term will not influence by a unit the seventh decimal place until the sixth central differences are 100, which will usually not be the case.

When p and q both terminate in .5 and are both > 10.5 the matter is more troublesome. We may apply the formula (xx) *quater* or the following formula:

$$\frac{1}{4}(z_{0,0} + z_{0,1} + z_{1,1} + z_{1,0}) - \frac{1}{128}(\delta^2 z_{0,0} + \delta^2 z_{0,1} + \delta^2 z_{1,1} + \delta^2 z_{1,0}) - \frac{5}{128}(\delta'^2 z_{0,0} + \delta'^2 z_{0,1} + \delta'^2 z_{1,1} + \delta'^2 z_{1,0})$$

$$+ \frac{1}{512}(\delta^2 z_{0,1} + \delta^2 z_{0,2} + \delta^2 z_{1,2} + \delta^2 z_{1,1}) + \frac{3}{512}(\delta^2 z_{1,0} + \delta^2 z_{2,0} + \delta^2 z_{-1,1} + \delta^2 z_{2,1})$$

$$+ \frac{1}{512}(\delta'^2 z_{1,0} + \delta'^2 z_{2,0} + \delta'^2 z_{-1,1} + \delta'^2 z_{2,1}) + \frac{3}{512}(\delta'^2 z_{0,1} + \delta'^2 z_{0,2} + \delta'^2 z_{1,2} + \delta'^2 z_{1,-1}) \quad \text{.....(xxxix).}$$

where the terms in δ^6 , δ'^6 have been neglected, and the terms in δ^4 , δ'^4 replaced by their equivalents in δ'^2 . Thus this formula will give correct results, if δ^6 , δ'^6 are negligible.

As far we have dealt with the case of r positive; we will now suppose r negative:

$$\frac{1}{2}(1 + \alpha_r) = \int_1^r \frac{z}{N} dr + \int_1^r \phi_1(r^2) dr + \int_{-1}^{-r} r \phi_2(r^2) dr.$$

Changing the sign of r in the two integrals

$$\frac{1}{2}(1 + \alpha_r) = \int_r^1 \phi_1(r^2) dr - \int_r^1 r \phi_2(r^2) dr,$$

where r is to be considered as positive on the right-hand side. Hence

$$\frac{1}{2}(1 + \alpha_r) = \int_0^1 \phi_1(r^2) dr - \int_0^r \phi_1(r^2) dr - \int_0^r r \phi_2(r^2) dr + \int_0^r r \phi_2(r^2) dr$$

$$= \frac{1}{2} - \left[\frac{1}{2} - \frac{1}{2}(1 - \rho^2)^{\frac{1}{2}(n-1)} \Sigma_1 \right] - \int_0^r r \phi_2(r^2) dr + \left[\int_0^1 r \phi_2(r^2) dr - \frac{1}{2} \frac{(1 - \rho^2)^{\frac{1}{2}(n-1)}}{B\left(\frac{1}{2}, \frac{n-1}{2}\right)} \Sigma_2 \right]$$

$$= \frac{1}{2}(1 - \rho^2)^{\frac{1}{2}(n-1)} \Sigma_1 - \frac{1}{2} \frac{(1 - \rho^2)^{\frac{1}{2}(n-1)}}{B\left(\frac{1}{2}, \frac{n-1}{2}\right)} \Sigma_2 \quad \text{.....(xl).}$$

Thus in finding Σ_1 and Σ_2 for the value of $\frac{1}{2}(1+\alpha_r)$, where r is positive, we have also very readily the value of $\frac{1}{2}(1+\alpha_{-r})$, where r is negative.

The chance that a sample correlation is greater than r is

$$\frac{1}{2}(1-\alpha_r) = \frac{1}{2}(1-\rho^2)^{\frac{1}{2}(n-1)} \Sigma_1 + \frac{1}{2} \frac{(1-\rho^2)^{\frac{1}{2}(n-1)}}{B\left(\frac{1}{2}, \frac{n-1}{2}\right)} \Sigma_2 \quad \dots\dots(\text{xli}).$$

Thus the probability that it lies outside the range $-r$ to $+r = (1-\rho^2)^{\frac{1}{2}(n-1)} \Sigma_1$, or the chance that it lies inside the range is

$$1 - (1-\rho^2)^{\frac{1}{2}(n-1)} \Sigma_1 \quad \dots\dots(\text{xlii}),$$

or if we merely need this chance we do not require Σ_2 .

Illustration 6. Samples of 10 are taken from an indefinitely large normal population with a correlation of 0.6 between two variates. What is the probability that the correlation in a sample will exceed 0.9?

We have to determine from the tables the value of Σ_1 and Σ_2 in a case of very slow convergence. Consider first the external factors of the series Σ_1 and Σ_2 .

For Σ_1 we need
$$\frac{1}{2}(1-\rho^2)^{\frac{1}{2}(n-1)} = \frac{1}{2}(1-0.36)^{\frac{9}{2}} = \frac{1}{2}(.8)^9.$$

This is given at once by tables of the higher powers*,

$$= .067,108,864.$$

For Σ_2 we need to divide this by $B\left(\frac{1}{2}, \frac{n-1}{2}\right) = B(4.5, 0.5)$. This is given at the head of the column for $q=0.5$, $p=4.5$ in the *Tables of the Incomplete B-function* $= .8590,2924$. Thus the required external factor is $.067,108,864/.8590,2924 = .0781,2174,59$.

Table II, p. xliv, shows the computing of S_1 . We have $1-r^2 = 1-(.9)^2 = .19$, but after $I_{.19}(4, 3.5)$ we are obliged to use the formula

$$I_{.19}(4, s+.5) = 1 - I_{.81}(s+.5, 4)$$

because in the table p is always equal or greater than q . Again after $s=10$, we are compelled to use the interpolation formula (xxxviii). The values of $I_{.19}(4, q)$ were obtained from $I_{.81}(q, 4)$ for $q=8$ to 24 as shown in Table I on the opposite page.

The values of δ^6 are given merely to show that they are negligible. Subtracting the results in the last column from unity we complete the first column of Table II (p. xliv) beyond 10.5, where it was not feasible to extract the values of $I_{.19}(4, q+.5)$ without interpolation from the *Tables of the Incomplete B-Function*.

Table II shows us by its last column that the contribution of Σ_1 to the value required is .012,3844, which is probably hardly a unit wrong in the seventh decimal. We can hardly expect a better result without using the manuscript B-function tables which go to more than seven figures.

For many purposes it would be adequate to get the final result to three-figure accuracy. The last column (f) indicates that ten terms would suffice, in which case we should not need Table I and its interpolations into the B-function table. If we require four-figure accuracy we must go as far as the fifteenth term; five-figure accuracy demands the computation of seventeen terms.

We now turn to the computing of the second series Σ_2 , and we have arranged the work in like manner. We are saved here any interpolation corresponding to Table I for all the values can be abstracted from the tables straight off. Table III (p. xlv) corresponds to Table II (p. xliv). The total contribution to $\frac{1}{2}(1+\alpha_r) = .0123,8391$. Thus the chance that a sample taken from a normal population of correlation .6, will not exceed .9 is $1 - .012,3844 - .012,3839$

$$= .975,2317$$

which will hardly be more than a unit wrong in the last figure, if there be no slip in the somewhat lengthy arithmetic.

* *Tables for Statisticians and Biometricians*, Part II, p. 259, or Dr Comrie's edition of *Barlow's Tables*, p. 203.

Table I. *Interpolations into B-function Table.*

q	$I_{.81}(q, 4)$	δ^2	δ^4	δ^6 $I_{.85}(q + .5, 4)$
8	.8602,980	---	---	---
9	.8204,525	- 31,875	---	---
10	.7774,195	- 22,808	- 266	---
11	.7321,057	- 14,007	- 632	+ 120
12	.6853,912	- 5,838	- 878	+ 122
13	.6380,929	+ 1,455	- 1002	+ 75
14	.5909,401	+ 7,746	- 1051	+ 61
15	.5445,619	+ 12,986	- 1039	+ 44
16	.4994,823	+ 17,187	- 983	+ 30
17	.4561,214	+ 20,405	- 897	+ 15
18	.4148,010	+ 22,726	- 796	+ 6
19	.3757,532	+ 24,251	- 689	0
20	.3391,305	+ 25,087	- 582	+ 1
21	.3050,165	+ 25,341	- 474	- 18
22	.2734,366	+ 25,121	- 384	+ 4
23	.2443,688	+ 24,517	- 290	---
24	.2177,527	+ 23,623		
25	.1934,989			

chance that r will be negative and exceed $-.9 = .012,3844 - .012,3839 = .000,0005$. Finally the chance will lie in the range $-.9$ to $+.9 = 1 - 2 \times .012,3844 = .975,2312^*$.

It is interesting to compare the probability obtained with that deduced by other methods. The probability that a sample of 10 from a population of correlation .6 will give a correlation:

Relative frequency of r	Actual Value	By Quadrature		Garwood's Formula (<i>Biometrika</i> , Vol. xxv, p. 71)	Fisher's Method	
		From three ordinates	From five ordinates		Simpler Method	More approximate Method
	(a)	(b)	(c)	(d)	(e)	(f)
Area of .90	.024,7683	.02553	.02477	.02477	.02425	.02256
W = .90	.000,00015	.000,0006			.000,000,003	.000,000,002

was obtained by the simple quadrature formula for three ordinates: $\text{Area} = h \{ \frac{1}{2} (y_0 + 2y_1 + y_2) - \frac{1}{24} (\delta^2 y_0 + 2\delta^2 y_1 + \delta^2 y_2) \}$. The ordinates being those at .90, .95 and 1.00.

was obtained by introducing ordinates at .925 and .975. Only five-figure accuracy could be obtained as only five figures were used in the ordinates (see *Tables for Statisticians*, Part II, p. 192). (d) Garwood's Formula (for $n=10$) is exact, but it depends on ordinates for samples of 10 and earlier samples, and these, as already stated, have only been tabled to five figures. Fisher's method is somewhat better at this part of the table to give a better result than his more approximate method (f). Neither is as good as quadrature from five ordinates; both fail in the case of "Below -.90."

Table II. *Evaluation of Terms due to S_1 .*

s	(a) $I_{1s}(4, s+5)$	(b) $\frac{f_2(s+1)/f_{2s}}{2s+n-1} \rho^2$ $= \frac{2s+n-1}{2s+2} \rho^2$	(c) Product $f_0 f_2 \dots f_{2s}$	(d) $(a) \times (c)$	(e) $(d) \times .007,108,864$	(f) $S(c)$
0	.0003,872	—	1	.0003,872	.000,0260	.000,0260
1	.0029,529	1.62	1.62	.0047,837	.000,3210	.000,3470
2	.0091,875	.99	1.6038	.0147,349	.000,9888	.001,3358
3	.0202,976	.78	1.250,964	.0253,916	.001,7040	.003,0398
4	.0370,104	.675	.844,4007	.0312,516	.002,0973	.005,1371
5	.0595,727	.612	.516,7732	.0307,856	.002,0660	.007,2031
6	.0878,166	.57	.294,5607	.0258,673	.001,7359	.008,9300
7	.1212,530	.54	.159,0628	.0192,868	.001,2943	.010,2333
8	.1591,699	.5175	.082,3150	.0131,021	.000,8793	.011,1126
9	.2007,223	.50	.041,1575	.0082,612	.000,5544	.011,6670
10	.2450,085	.486	.020,0025	.0049,008	.000,3289	.011,9959
11	.2911,293	.4745,4545	.009,4921	.0027,634	.000,1854	.012,1813
12	.3382,328	.465	.004,4138	.0014,929	.000,1002	.012,2815
13	.3855,434	.4569,2308	.002,0168	.0007,776	.000,0522	.012,3337
14	.4323,810	.45	.000,9075 ⁵	.0003,924	.000,0263	.012,3600
15	.4781,688 ⁵	.444	.000,4029 ⁵	.0001,927	.000,0129	.012,3729
16	.5224,353	.43875	.000,1768	.0000,924	.000,0062	.012,3791
17	.5648,103 ⁵	.4341,1765	.000,0767 ⁵	.0000,433	.000,0029	.012,3820
18	.6050,182	.43	.000,0330	.0000,200	.000,0013	.012,3833
19	.6428,680	.4263,1579	.000,0141	.0000,091	.000,0006	.012,3839
20	.6782,429	.423	.000,0060	.0000,041	.000,0003	.012,3842
21	.7110,898	.42	.000,0025	.0000,018	.000,0001(2)	.012,3843
22	.7414,083	.4172,7273	.000,0010(4)	.0000,008	.000,0000(5)	.012,3843(5)

Total Contribution of First Series = .012,3844.

The last factor product is obtained for $s=21$ and should equal $\frac{\rho^{2s}}{sB\left(\frac{n-1}{2}, s\right)} = \frac{(.36)^{22} \Gamma(26.5)}{22 \times \Gamma(4.5) \Gamma(22)}$. Evaluating this by logarithms we find $f_0 f_2 f_4 \dots f_{42} = .000,0010(4)$ confirming the value obtained by continuous product.

(θ) *Further Applications. Uses of the Incomplete B-Function Table in Sampling Tests.*

(i) *Replacement of Type I by a Type III or by a Normal Curve.*

We may make certain remarks which have a bearing on all the tests which lead to a Pearson curve of Type I, or to a Type VI curve which can be transformed to Type I. The equation to Type I being

$$y = y_0 x^{p-1} (b-x)^{q-1} \quad \dots\dots(xliii)$$

has its mean given by $\bar{x} = \frac{pb}{p+q}$, its mode by $\tilde{x} = \frac{p-1}{p+q-2} b$ and its standard deviation by $\sigma^2 = \frac{pq b^2}{(p+q)^2 (p+q+1)}$

$\dots\dots(xliii) bis.$

Now if q be large while p remains moderate (xliii) approaches the form

$$y = y_0' x^{p-1} e^{-\frac{(q-1)x}{b}} \quad \dots\dots(xliv)$$

with mean $\bar{x} = \frac{pb}{q-1}$, mode $\tilde{x} = \frac{p-1}{q-1} b$ and $\sigma^2 = \frac{pb^2}{(q-1)^2}$, which are the values we obtain from the original curve if we make $p(>1)$ negligible as compared with q . The probability integral will then be given by $\Gamma_{x'}(p) \Gamma'(p)$, where $x' = \frac{q-1}{b} x$ and the unit may be neglected as compared to $\Gamma_{x'}(p)$.

This value may be taken from the *Table of the Incomplete Γ -Function*.

If both p and q are large (xliii) approaches the form of the Normal Curve

$$y = y_0'' e^{-\frac{1}{2} \frac{(p+q-2)^2}{b^2 (p-1)(q-1)} \left(x - \frac{p-1}{p+q-2} b\right)^2} \quad \dots\dots(xlv),$$

where of course we may neglect the units as compared with p and q .

Table III. *Evaluation of Terms due to Σ_2 .*

(a) $L_{10}(4, s+1)$	(b) $P_{2(s+1)} - 1/P_{2s+1}$ $(2s+1)p^2$ $(2s+3)p^2$	(c) Product $f_0 f_1 \dots f_s$	(d) $(a) \times (c)$	(e) $(d) \times .078,121,746$	(f) $S(c)$
-.0013,032	1.2	1.2	-.0015,6384	-.0001,2217	-.0001,2217
-.0055,256	1.2	1.44	-.0079,5686	-.0006,2160	-.0007,4377
-.0140,760	.804	1.2441,6	-.0175,1280	-.0013,6813	-.0021,1190
-.0279,276	.72	.8957,952	-.0250,1741	-.0019,5440	-.0040,6630
-.0475,622	.64	.5733,0893	-.0272,6783	-.0021,3021	-.0061,9651
-.0730,086	-.5890,9091	-.3377,3108	-.0246,5757	-.0019,2629	-.0081,2280
-.1039,261	-.5538,4615	-.1870,5100	-.0194,3949	-.0015,1865	-.0096,4145
-.1397,020	-.528	-.0987,6296	-.0137,9738	-.0010,7788	-.0107,1933
-.179,6475	-.5082,3529	-.0501,9482	-.0090,1235	-.0007,0406	-.0114,2339
-.222,5805	-.4926,3158	-.0247,2755	-.0055,0387	-.0004,2997	-.0118,5336
-.267,8943	-.48	-.0118,6923	-.0031,7970	-.0002,4840	-.0121,0176
-.314,6088	-.4695,6522	-.0055,7338	-.0017,5343	-.0001,3698	-.0122,3874
-.361,9071	-.4608	-.0025,6821	-.0009,2945	-.0000,7261	-.0123,1135
-.409,0599	-.4533,3333	-.0011,6426	-.0004,7625	-.0000,3721	-.0123,4856
-.456,4381	-.4468,9655	-.0005,2030	-.0002,3696	-.0000,1851	-.0123,6707
-.500,5177	-.4412,0032	-.0002,2960	-.0001,1492	-.0000,0898	-.0123,7605
-.543,8786	-.4363,6364	-.0001,0019	-.0000,5449	-.0000,0426	-.0123,8031
-.585,1990	-.432	-.0000,4328	-.0000,2533	-.0000,0198	-.0123,8229
-.624,2468	-.4281,0811	-.0000,1853	-.0000,1157	-.0000,0090	-.0123,8319
-.660,8695	-.4246,1538	-.0000,0787	-.0000,0520	-.0000,0041	-.0123,8360
-.694,9835	-.4214,6341	-.0000,0332	-.0000,0231	-.0000,0018	-.0123,8378
-.726,5631	-.4186,0465	-.0000,0139	-.0000,0101	-.0000,0008	-.0123,8386
-.755,6312	-.416	-.0000,057(7)	-.0000,0044	-.0000,0003	-.0123,8389
-.782,2473	-.4136,1702	-.0000,0023(9)	-.0000,0019	-.0000,0001	-.0123,8390
-.806,5011	-.4114,2857	-.0000,0009(8)	-.0000,0008	-.0000,0000(6)	-.0123,8391

Total Contribution of Second Series = .0123,8391.

est factor product is obtained for $s = 24$ and should equal $B(\frac{1}{2}n + s, s+1) \frac{(2p)^{2s+1}}{B(\frac{1}{2}n, 2s+2) \frac{1}{2}n + 2s+1} = .0000,0000(8)$, which accords with c , obtained by continuous product.

$x = \frac{p-1}{p+q-2}b$ and $\sigma^2 = \frac{(p-1)(q-1)b^2}{(p+q-2)^3}$, and the probability integral may be found from the of the normal probability integral by entering it with

$$\left(x - \frac{p-1}{p+q-2}b \right) / \frac{b \sqrt{(p-1)(q-1)}}{(p+q-2)^{\frac{3}{2}}}.$$

These approximations will often be adequate when either p or q or both lie well outside our table. Other methods of finding more exact values of the incomplete B-function when p and q lie outside the of the present table have been discussed by Super* and by Wishart†. A consideration and description of these authors' method is provided in *Tables for Statisticians and Biometricians*, Part II, pp. cccxv–i. The methods of Muller‡ and Camp§ (*Tables for Statisticians*, II, pp. xxx–xl) are also dealt with. No method has hitherto been discovered for evaluating numerically the incomplete B-function for all of p and q .

values of β_1 and β_2 for the curve

$$y = y_0 x^{p-1} (1-x)^{q-1} \\ \beta_1 = \frac{4(q-p)^2(p+q+1)}{pq(p+q+2)^2}, \quad \beta_2 = \frac{3(p+q+1)\{2(p+q)^2 + pq(p+q-6)\}}{pq(p+q+2)(p+q+3)} \quad \dots (xlv).$$

* "Numerical Evaluation of the Incomplete B-Function," *Tracts for Computers*, No. VII. Cambridge University Press.

† *Biometrika*, Vol. XXX, pp. 1–38.

‡ *Ibid.* Vol. XXV, pp. 284–287.

§ *Ibid.* Vol. XVI, pp. 164 et seq.; Vol. XVII, pp. 61 et seq.

By aid of these β 's it is possible to test readily whether a given curve of Type I,

$$y = y_0 x^{p-1} (1-x)^{q-1},$$

may be reasonably replaced by either a Type III curve, i.e. (xliv), or a normal curve, i.e. (xlv), so that the *Tables of the Incomplete Γ -Function*, or of the Normal Probability Integral are adequate.

The condition for a Type III curve is that $2\beta_2 - 3\beta_1 - 6 = 0$, or substituting from (xlvi) that

$$-\frac{12(p+q)^2(pq+p+q+1)}{pq(p+q+2)^2(p+q+3)} = 0 \quad \dots\dots(xlvii).$$

Since p and q are always positive, i.e. > 0 , this condition can only be approximately satisfied by either p or q or both being large. A brief examination of the β_1, β_2 columns in Table II, pp. 434-494 of the present volume, will suffice to indicate that up to the value of p , or $q=50$, the expression (xlvii) does not become small enough to allow of Type III replacing Type I for any but the roughest purposes. The conditions for a normal curve are that β_1 should be very small, preferably zero, and β_2 equal or very nearly equal to 3. An examination shows that for every value of p, β_2 falls as q rises from 0.5 to 50 from a value much above 3 to a value below 3, and then proceeds to rise again and may again pass through the value three.

In all cases in our Table II where β_2 first approaches the value 3, the value of β_1 is not sufficiently small to justify us in assuming it zero and applying the Normal Curve.

At and after $p=20$, we get values such as

$$\begin{aligned} p=20, \quad q=50, \quad \beta_1 &= .0493, \quad \beta_2 = 2.9908, \\ p=21, \quad q=50, \quad \beta_1 &= .0433, \quad \beta_2 = 2.9830, \\ p=31, \quad q=50, \quad \beta_1 &= .0111, \quad \beta_2 = 2.9450, \\ p=40, \quad q=50, \quad \beta_1 &= .0022, \quad \beta_2 = 2.9387. \end{aligned}$$

Thus while p is rising the second approach of β_2 to 3 falls as β_1 reaches a value where it might be negligible. When $p=50$ the first approach of β_2 to 3, i.e. when $q=19, \beta_2=2.9998$, is accompanied by a $\beta_1=.0562$, which is hardly a negligible β_1 . By the time β_1 has fallen to zero, β_2 has passed through its minimum 2.9387 and risen to 2.9417.

It would thus appear that $p=50, q=50$ would provide as little deviation as will occur anywhere in our table from a normal curve. The true curve is of course $y=y_0(1-4x^2)^{49}$ with a standard deviation of $\frac{50}{100\sqrt{101}} = 1/20.099,7512$. If we take the distance x from the start of the range as in our table, p. 434, to be .47, the proportionate area = .2745,724. This corresponds to a distance .03 from the centre of the approximate normal curve $y=y_0'e^{-1404x^2}$.

Accordingly we must find $\frac{1}{2}(1-\alpha)$ from the probability integral table for

$$x/\sigma = .03 \times 20.099,7512 = .6029,0254,$$

which gives $\frac{1}{2}(1-\alpha) = .2732,571$, indicating an error of .0013, or more than unity in the third significant figure. Trying again at $x=.4$, where the true value is .0219,304, we have from the normal curve, since its $x=.1, x/\sigma=2.0099,751$, the value $\frac{1}{2}(1-\alpha) = .0222,201$, making an error of .00029, i.e. an error of 3 in the fourth decimal place, or of 3 in the third significant figure. Thus we cannot expect to be correct to less than a unit in the third significant figure, if we replace the incomplete Γ -function ratio table by the normal probability integral table within the limits of p and q in the present table. Outside that table for p and q of the order 100, the results are better.

(ii) A Convenient Univariate Formula.

In our applications to sampling tests we have frequently to interpolate for one variable only. If we have to interpolate into our table for one of the three variates only lying at (θ, ϕ) between z_s and z_{s+1} , then the following formula is convenient:

$$\begin{aligned} z_{\theta, \phi} &= (1 + \frac{1}{2}\theta\phi) \{ \phi z_s + \theta z_{s+1} \} - \frac{1}{6}\theta\phi \{ (1+\phi)z_{s-1} + (1+\theta)z_{s+2} \} \\ &+ \frac{1}{120}\theta\phi(1+\theta)(1+\phi) \{ 10(\phi z_s + \theta z_{s+1}) - 5 \{ (1+\phi)z_{s-1} + (1+\theta)z_{s+2} \} + \{ (2+\phi)z_{s-2} + (2+\theta)z_{s+3} \} \} \dots(xlviii). \end{aligned}$$

The first line is adequate if we only need to go to third differences; the second line carries us to fifth differences. If we wish to use the whole formula, the addition of the terms between curled brackets is easy

of the three z factors will already have been computed in the first line. To determine whether in the second line, we remark that if

$$2(z_{n-1} + z_{n+1}) - 3(z_{n-1} + z_{n+2}) + (z_{n-2} + z_{n+3}) \text{ be } < .0000427 \quad \text{.....(xlix),}$$

correct to six decimals. If it be $< .000427$, we shall be correct to five decimals; and if $< .00427$, correct to four decimals, by doing so.

of the tables will find it easier to work with this formula than to proceed to find differences.

of the Difference between the Variances in two Independent Samples.

variable x be normally distributed with mean m and standard deviation σ , and suppose we have independent samples with means x_1 and x_2 , and standard deviations s_1 and s_2 , also drawn from normally distributed populations. Then the distribution curve of the variance s^2 in a sample of size n is given by

$$df = \frac{1}{\Gamma(\frac{1}{2}(n-1))} \left(\frac{ns^2}{2\sigma^2} \right)^{\frac{1}{2}(n-3)} e^{-\frac{ns^2}{2\sigma^2}} d \left(\frac{ns^2}{2\sigma^2} \right) \quad \text{.....(l).}$$

problem is to test the significance of the difference between s_1 and s_2 , or in other words to test the hypothesis that in the sampled populations $\sigma_1 = \sigma_2$.

appropriate criterion* is the ratio $\theta = s_1^2/s_2^2$. If the hypothesis be true, it is assumed that θ will be abouthood of unity; while if θ be near zero or very large we shall be inclined to reject it in favour of the alternative hypothesis $\sigma_1 < \sigma_2$ or $\sigma_1 > \sigma_2$ respectively. If the hypothesis $\sigma_1 = \sigma_2$ be true the sampling distribution of θ is independent of the value of σ (which is frequently unknown) and is given by

$$df = \frac{n_1^{4n_1-1} n_2^{4n_2-1}}{B(\frac{1}{2}(n_1-1), \frac{1}{2}(n_2-1))} \theta^{4n_1-3} (n_2 + n_1 \theta)^{-4(n_1+n_2-2)} d\theta \quad \text{.....(li).}$$

Pearson curve Type VI. If we make the appropriate transformation

$$x = \frac{n_1 \theta}{n_2 + n_1 \theta} = \frac{n_1 s_1^2}{n_1 s_1^2 + n_2 s_2^2} \quad \text{.....(lii),}$$

the sampling distribution of x Type I curve

$$df = \frac{1}{B(\frac{1}{2}(n_1-1), \frac{1}{2}(n_2-1))} x^{4n_1-3} (1-x)^{4(n_2-3)} dx \quad \text{.....(liii).}$$

accordingly throw light on the hypothesis $\sigma_1 = \sigma_2$ by entering the B-function table with

$$x = \frac{n_1 s_1^2}{n_1 s_1^2 + n_2 s_2^2}, \quad p = \frac{1}{2}(n_1-1), \quad q = \frac{1}{2}(n_2-1).$$

exceptionally small, i.e. if $I_c(p, q)$ be small, we shall be inclined to think that $\sigma_1 < \sigma_2$; if x be exceptionally large, that is if $1 - I_c(p, q)$ be small, we shall believe that $\sigma_1 > \sigma_2$. The confidence in such beliefs is measured by the value of the probability $I_c(p, q)$.

following points may be noted with regard to this test†:

we must be good ground for supposing that the sampling has been made from populations normally distributed.

Tables cover the range up to size 101, and no interpolation will be needful for p and q if both n_1 and n_2 are odd. Nor will interpolation be required in other cases unless the larger n is even and greater than 101.

mean and standard deviation of x from (lxiii) are by (lxiii) bis

$$x = \frac{n_1-3}{n_1+n_2-6}, \quad \sigma_x = \frac{1}{n_1+n_2-2} \sqrt{\frac{2(n_1-1)(n_2-1)}{n_1+n_2}} \quad \text{.....(liv),}$$

by (lv) we have

$$\frac{(n_1-n_2)^2(n_1+n_2)}{(n_2-1)(n_1+n_2+2)^2} \beta_2 = \frac{3(n_1+n_2)\{4(n_1+n_2-2)^2 + (n_1-1)(n_2-1)(n_1+n_2-14)\}}{(n_1-1)(n_2-1)(n_1+n_2+2)(n_1+n_2+4)} \quad \text{....(lv).}$$

able to select other criteria, and these may give a definite answer when θ fails to do so. Thus we might consider $s_2^2 - s_1^2$. Tables for the former are already calculated: see *Biometrika*, Vol. xxiv, pp. 344-346, and for a discussion of the double Bessel K -function, see *Biometrika*, Vol. xxiv, pp. 158-178.

in somewhat different form is due to R. A. Fisher, see Section (viii), p. lviii below.

Consequently as n_1 and n_2 grow large, i.e. as the number of observations are increased, the distribution will approximate to the normal*.

Having regard to the limits suggested in the footnote we may use the normal distribution. We then calculate the ratio

$$R_1 = \frac{x - \text{Mean } x}{\sigma_x},$$

and interpret its value by reference to the normal probability scale. It is easy to show that, if we neglect 3 as compared to n_1 and n_2 ,

$$R_1 \rightarrow \frac{s_1^2 - s_2^2}{n_1 s_1^2 + n_2 s_2^2} \sqrt{\frac{n_1 n_2 (n_1 + n_2)}{2}}.$$

Now we can look at this from another, the older, standpoint. The standard deviations of the distributions of s_1^2, s_2^2 (see p. xlv) are $\sigma^2 \sqrt{\frac{2(n_1-1)}{n}}$ and $\sigma^2 \sqrt{\frac{2(n_2-1)}{n_2}}$. Thus the standard deviation of their difference is $\sigma^2 \sqrt{2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}$, if we may neglect the unit as compared with n_1 or n_2 . Accordingly we should enter the normal probability table with

$$R_2 = \frac{(s_1^2 - s_2^2)}{\sigma^2 \sqrt{2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \dots\dots (lvi).$$

This will agree with the limiting value of R_1 above if we take as a suitable value for σ^2 the weighted mean variance of the two samples, i.e. $\sigma^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2}$ †.

Thus in the actual formal process of looking up an R in the normal probability table the two methods agree when n_1 and n_2 are large. But the meaning of the expression $n_1 s_1^2 + n_2 s_2^2$ is different in the two methods. In (li) and (lii) s_1^2 and s_2^2 are varying from sample pair to sample pair, both in numerator and denominator of x or $1-x$. But in the value

$$R_2 = \frac{s_1^2 - s_2^2}{n_1 s_1^2 + n_2 s_2^2} \sqrt{\frac{n_1 n_2 (n_1 + n_2)}{2}}$$

s_1^2 and s_2^2 are supposed to vary in the numerator and $n_1 s_1^2 + n_2 s_2^2$ stands for a constant $\sigma^2(n_1 + n_2)$. It is only the first method which shows us that the limiting distribution of R is the same if n_1 and n_2 are large, whether we suppose s_1^2 and s_2^2 to vary or not to vary in the denominator.

(d) If it be not known, whether or not the variables are normally distributed the test must be used with caution for both small‡ and large samples. We know that the means of large samples from any parent population follow closely the normal law; it has not yet been shown that the standard deviations of samples from any non-normal parent population follow a distribution law like (l), but we may argue from the values of β_1 and β_2 for the standard deviations in the case of large samples from any population that their standard deviations will approach a normal distribution as the size of the sample increases.

Illustration 7. Weights were taken of two series of male mice between 160 and 180 days old; the first series was for litters of 5, and the second for litters of 4.

* But the approximation is not so rapid as some have suggested. Thus if $n_1 = 80, n_2 = 100$ we have $\beta_1 = .002,2234$ and $\beta_2 = 2.038,0815$. We may perhaps treat β_1 as practically zero, but β_2 is hardly sufficiently close to 3 to use a normal distribution. This corresponds to values of $p = 39.5$ and $q = 49.5$ lying inside our table. If $n_1 = 101$ and $n_2 = 201$, then $\beta_1 = .001,0929$ and $\beta_2 = 2.968,8434$ for which a normal distribution might be reasonably adopted for most practical purposes. If we are content with two-figure accuracy we may use a normal distribution when our table ceases; otherwise we must get well into the second hundred in the size of our samples before we can work with that distribution. This means using, say, Muller's process (*Tables for Statisticians*, Part II, pp. cxxxiv-cxxxvi) to determine the incomplete B-function in the field from $p, q, 50$ to $70, 70$. (For $p = 60, q = 70$, we have $\beta_1 = .001,7116, \beta_2 = 2.955,953$, the latter being not close enough to 3 to provide more than two-figure accuracy.)

† Actually the most probable value of σ^2 is $\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}$, and is obtained by making the expression

$$\left(\frac{1}{\sigma^2}\right)^{\frac{1}{2}(n_1-1) + \frac{1}{2}(n_2-1)} e^{-\frac{n_1 s_1^2 + n_2 s_2^2}{2\sigma^2}}$$

a maximum for σ^2 .

‡ See E. S. Pearson, *Biometrika*, Vol. xxiii, pp. 129-311.

es 1. (Litters of 5.) $n_1 = 43$, $\bar{x}_1 = 23.849$ gm., $s_1^2 = 22.383$ (gm.)².

es 2. (Litters of 4.) $n_2 = 29$, $\bar{x}_2 = 25.698$ gm., $s_2^2 = 19.984$ (gm.)².

assuming that the distribution of weight within a homogeneous group is nearly normally distributed we first apply the test to compare s_1^2 and s_2^2 .

$$x = n_1 s_1^2 / (n_1 s_1^2 + n_2 s_2^2) = .6241, 872, \quad p = \frac{1}{2} (n_1 - 1) = 21, \quad q = \frac{1}{2} (n_2 - 1) = 14.$$

could be adequate to carry out the interpolation to four decimal places, but we will illustrate the formulae (xlvi) and (xlix) on this case. The values needed from our table are:

$x = .60$	$.4907, 854$	$= z_{s-2}$
$.61$	$.5386, 903$	$= z_{s-1}$
$.62$	$.5863, 334$	$= z_s$
$.63$	$.6330, 552$	$= z_{s+1}$
$.64$	$.6782, 206$	$= z_{s+2}$
$.65$	$.7212, 441$	$= z_{s+3}$

so by a continuous operation on the machine we have by (xlix) our criterion = .0000,740. This lies between .000,427 and .0000,427, and accordingly we shall be correct to five decimals, if we use only the value of (xlvi). We find

$$\theta = .41872, \quad \phi = .58128, \quad \theta\phi = .243, 394, \quad 1 + \frac{1}{2}\theta\phi = 1.121, 697, \quad \frac{1}{6}\theta\phi = .040, 5637,$$

and accordingly

$$z_{\theta, \phi} = .679, 6326 - .073, 5872 = .606, 0454.$$

is correct to five decimals, or $I_x(p, q) = .60605^*$. It follows that even where there is no difference in variability in the populations sampled we should expect to find s_1^2 still greater than s_2^2 as here occurs in 39% of pairs of random samples of this size. Hence there appears no reason to discard the hypothesis $\sigma_1 = \sigma_2 = \sigma$ in favour of $\sigma_1 > \sigma_2$, i.e. no reason to suppose that the variability in weight of male mice among litters of five mice is greater than among litters of four mice.

We may now compare the means, assuming a common standard deviation, σ . We shall use as an estimate the value of σ that given in the second footnote, p. xlviii, i.e.

$$\sigma_c^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2} = 22.029,$$

so the ratio of the difference in means to the estimated standard error of that difference is provided by

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sigma_c \sqrt{\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = -1.639.$$

The sampling distribution of t , given under Section (vi) below, is:

$$df = \frac{1}{B\left(\frac{1}{2}n, \frac{1}{2}\right)} \left(1 + \frac{t^2}{n}\right)^{-\frac{1}{2}(n+1)} d\left(\frac{t}{\sqrt{n}}\right) \quad \dots\dots (lviii),$$

in our case $n = n_1 + n_2 - 2$.

Using the transformation $x = \left(1 + \frac{t^2}{n}\right)^{-1}$ we find that the chance that $t \geq t_0$ is equal to $\frac{1}{2} I_{x_0} \left(\frac{1}{2}n, \frac{1}{2}\right)$,

so $x_0 = 1 / \left(1 + \frac{t_0^2}{n}\right)$. For our case $x_0 = .963, 0423$, and $n = 70$.

We may prefer to use the formula $z_{\theta, \phi} = \phi z_s + \theta z_{s+1} - \frac{1}{4}\theta\phi (\delta^2 z_s + \delta^2 z_{s+1})$ (lvii),

correct to four decimal places provided $\delta^2 z_s$ or $\delta^2 z_{s+1} < .0060$, and $\delta^2 z_s < .0020$. But formula (xlvi) saves all differencing and the criterion (xlix) is simpler than the double criterion. Besides this it is advisable to use as few formulae as possible and to cover much more ground than (lvii). Applying (lvii) in this case, after cutting down all x values to four figures, we have $.6061$ in practical agreement with the above value.

NUMERICAL ILLUSTRATION OF DIFFERENCE OF MEANS

Thus we have to ascertain the value of $\frac{1}{2}I_{.963,0423}(35, 0.5)$ from our table. The values we require are:

$x_{s-2} = .94$	$z_{s-2} = .0380,987$
$x_{s-1} = .95$	$z_{s-1} = .0590,067$
$x_s = .96$	$z_s = .0921,005$
$x_{s+1} = .97$	$z_{s+1} = .1456,708$
$x_{s+2} = .98$	$z_{s+2} = .2360,314$
$x_{s+3} = .99$	$z_{s+3} = .4032,812$

Applying our criterion (xlix) we have

$$2(z_s + z_{s+1}) - 3(z_{s-1} + z_{s+2}) + (z_{s-2} + z_{s+3}) = .031,8082,$$

and this is less than .0427, i.e. if we retain only the first line of our formula (xlvi), we cannot be sure of being correct in the second significant figure. We therefore retain the second line of our formula (xlvi). We have

$$\begin{aligned} \theta &= .30423, \quad \phi = .69577, \quad \theta\phi = .211,6741, \\ (1 + \frac{1}{2}\theta\phi) &= 1.105,8371, \quad \frac{1}{6}\theta\phi = .035,2790, \quad \frac{1}{120}\theta\phi(1 + \theta)(1 + \phi) = .003,9013, \\ \phi z_s + \theta z_{s+1} &= .108,3982, \quad (1 + \phi)z_{s-1} + (1 + \theta)z_{s+2} = .407,9010, \end{aligned}$$

and

$$(2 + \phi)z_{s-2} + (2 + \theta)z_{s+3} = 1.031,9580.$$

Hence

$$\begin{aligned} z_{\theta, \phi} &= .119,8707 - .014,3903 + .000,2982 \\ &= .052,8893. \end{aligned}$$

This value is probably correct to five decimal places, i.e. the chance that \bar{x}_1 is so much less than x_2 if they were samples of the same population would be .05289.

Had we referred t to the normal scale as sufficiently representing the distribution curve (lviii) we find $\frac{1}{2}(1 - \alpha)$, for $x = 1.639$, to be .05061.

Thus the normal probability table does not give a correct answer to three decimals, or is out two units in the second significant figure. This error may be negligible for many statistical purposes, but it confirms the view previously expressed, that for accurate work if only to three decimal places we cannot start with the Normal Curve, where our present table ends.

The value .053 is not clearly significant of a difference in the mean weights of male mice from litters of five and four, but the result suggests that the mice in the larger litters are possibly on the average lighter than those in the smaller litters, and this result is borne out if a study be made for a greater range of litter sizes*.

(iv) *Test of Hypotheses regarding the form of Regression Curves.*

Suppose that x and y are two variable characters; that the former, which may or may not be continuous, is divided into a number, k , of categories (or arrays), and that the latter is continuous. In a sample of N individuals let \bar{y} and s represent the mean and standard deviation of the total distribution of y . Further, let n_t , y_t , \bar{y}_t and s_t represent the number, any individual, the mean and standard deviation respectively of the y 's falling into the t th category or array of x . Let Σ denote the summation for all y 's in an array and S the summation of all arrays, then

$$\bar{y}_t = \frac{1}{n_t} \Sigma (y_t), \quad s_t^2 = \frac{1}{n_t} \Sigma (y_t - \bar{y}_t)^2 \quad \dots\dots(\text{lix}),$$

$$\bar{y} = \frac{1}{N} \sum_{t=1}^k S(n_t \bar{y}_t), \quad s^2 = \frac{1}{N} \sum_{t=1}^k S \Sigma (y_t - \bar{y})^2 \quad \dots\dots(\text{lx}).$$

The problem is now to test the hypothesis that in the sampled population the regression curve of y upon x is of a certain form

$$Y_x = f(x, a_0, a_1, \dots a_{i-1}) \quad \dots\dots(\text{lxi}),$$

where the a 's represent i parameters entering into the function f .

The following test may be used under the conditions indicated.

* Dr Edgar Schuster made a study many years ago of the inheritance of the size of the long bones in adult mice, with the result that small correlations only were found between the bones of parents and offspring. His data indicated that size of skeleton was influenced to a considerable extent by size of the litter in which the individual was born, and this probably obscured the hereditary influence.

suppose that the parameters a_1, a_2, \dots, a_t enter into (lxi) in a linear form; for example, the curve may be a $(t-1)$ th order parabola*

$$Y_x = a_0 + a_1x + a_2x^2 + \dots + a_{t-1}x^{t-1} \quad \text{.....(lxii).}$$

values of the a 's can then be determined by minimising

$$\frac{1}{N} \sum_{t=1}^{t-k} n_t (y_t - Y_t)^2,$$

Y_t is the ordinate of (lxii) for $x = t$.

The criterion to use in testing the hypothesis—which is a criterion of goodness of fit—may be taken as

$$\psi = \frac{\frac{1}{N} \sum_{t=1}^{t-k} n_t (y_t - Y_t)^2}{\frac{1}{N} \sum_{t=1}^{t-k} (n_t s_t^2)} \quad \text{.....(lxiii),}$$

ratio of the weighted mean square deviation of the array means from the fitted curve to the weighted array variances.

A. Fisher† has shown that if in the population sampled

- (i) the regression curve be of the supposed form,
- (ii) the standard deviations of the arrays of y are homoscedastic,
- (iii) the distribution in these arrays is normal,

the distribution of ψ in repeated samples of N follows the law

$$df = \frac{1}{B(\frac{1}{2}(N-k), \frac{1}{2}(k-1))} \psi^{k(k-1)/2} (1+\psi)^{k(N-k)/2} d\psi \quad \text{.....(lxiv).}$$

The transformation $x = 1/(1+\psi)$ applied to (lxiv) leads to the B-function form

$$df = \frac{1}{B(\frac{1}{2}(N-k), \frac{1}{2}(k-1))} x^{k(N-k)/2} (1-x)^{k(k-1)/2} dx \quad \text{.....(lxv).}$$

This result is true whether in repeated sampling the array totals, n_t 's, are kept the same or vary in a regular manner.

4 Cases.

1. To test the hypothesis that $Y_x = a_0 =$ a constant, that is to say that the array means are uncorrelated in the population sampled.

In this case $\psi = \eta^2/(1-\eta^2)$, $x = 1/(1+\eta^2)$ and (lxv) takes the form of the well-known distribution‡ of η^2 in repeated samples when the population value is zero, namely,

$$df = (\eta^2)^{k(k-1)/2} (1-\eta^2)^{k(N-k)/2} d\eta^2 \quad \text{.....(lxvi).}$$

Tables have then to be entered with

$$x = 1/(1+\eta^2), \quad p = \frac{1}{N} \sum_{t=1}^{t-k} n_t (y_t - \bar{y})^2 / s^2, \\ p = \frac{1}{2}(N-k), \quad q = \frac{1}{2}(k-1).$$

As η^2 increases from 0 towards 1 the hypothesis tested becomes less and less likely. If on the other hand η^2 is exceptionally low so that $1 - I_x(p, q)$ is very small, this shows that the variation in the array means is less than would be expected through chance, and we are naturally led to question whether (lxvi) is the correct distribution, it having been deduced on the basis of the *three* hypotheses (c), (i)–(iii), any one of which—not necessarily (c) (i)—may not hold.

The curve might also be of the form $Y_x = a_0 + \frac{a_1}{x} + \frac{a_2}{x^2} + \dots + \frac{a_{t-1}}{x^{t-1}}$.

Journal of the Royal Statistical Society, Vol. LXXXV, pp. 597–612.

The distribution of η^2 is “well known,” but it is not so generally recognised that the proof depends on a series of very restrictive assumptions; in particular, if the correlation surface be normal and the subranges finite, then the arrays cannot be truly homoscedastic; if the subranges be finite and the arrays truly homoscedastic, then (iii) must be interpreted as applying only to the arrays and their summation will not give a surface which is in itself normal. Hence bivariate normal surfaces are theoretically inadmissible on this test.

TESTS OF LINEAR REGRESSION

(b) $i = 2$. To test the hypothesis $Y_x = a_0 + a_1x$, that is to say that the regression in the population is linear.(lxvii).

Here

$$\psi = (\eta^2 - r^2)/(1 - \eta^2) \quad \text{and} \quad x = (1 - \eta^2)/(1 - r^2)$$

The tables have then to be entered with

$$x = (1 - \eta^2)/(1 - r^2), \quad p = \frac{1}{2}(N - k), \quad q = \frac{1}{2}(k - 2),$$

and the hypothesis of linear regression becomes less probable as x tends from 1 to 0. The following points may be noted with regard to these tests:

(i) There must be good reason for supposing that the standard deviations of the arrays are the same and that the array distributions are normal in the parent population, otherwise the test is not one of linear regression, but of whether one of the three hypotheses (c), (i)–(iii), be incorrect. In anthropological distributions (c) (ii) and (c) (iii) are very often known to be incorrect, and this test of linearity of regression is inapplicable.

(ii) The present B-function table only extending to $p, q = 50, 50$, or only admits of N being $100 + k$, or as k is usually not in excess of 15 to 20 groups, it will not be of service, when N , as frequently, is over 115 to 120. In such a case p is large and $q = \frac{1}{2}(k - 2)$ is small, we are accordingly thrown back on forming

$$I_x(p, q) = 1 - I_{1-x}(q, p).$$

Now $I_{1-x}(q, p)$ will be a case in which p is large and q small, or we may use the curve

$$y = y_0 x^{q-1} e^{-(p-1)x}$$

as indicated on p. xlv. Writing $(p-1)x = x'$ our curve will be of the form:

$$y = y_0' x'^{q-1} e^{-x'},$$

and accordingly the value $I_{1-x}(p, q)$ will be given by the incomplete Γ -function ratio

$$I(x', q-1),$$

where

$$x' = (p-1) \left(1 - \frac{1-\eta^2}{1-r^2} \right) = \frac{1}{2}(N-k-2) \frac{\eta^2-r^2}{1-r^2},$$

and accordingly the required probability is, in the notation of the *Tables of the Incomplete Γ -Function**,

$$\left. \begin{aligned} & 1 - I(u, \frac{1}{2}(k-4)) \\ & u = \frac{N-k-2}{\sqrt{2(k-2)}} \frac{\eta^2-r^2}{1-r^2} \end{aligned} \right\} \quad \text{.....(lxviii).}$$

where

(iii) When the samples are *small* the sampling distribution of x does not appear to be greatly modified when the array distributions differ considerably from the normal†.

Illustration 8. (Case $i = 1$.)

The table below shows the mean and standard deviation of length of life at marked voltage for each of 15 samples of 5 lamps which were withdrawn for testing from time to time during the course of routine production‡. Each sample may be taken as representative of the quality of output at the time it was withdrawn, and the problem is to consider whether there is any evidence for changes in quality with time.

Table IV. *Length of Life of Lamps in Hours.*

Sample No.	Mean	Standard Deviation	Sample No.	Mean	Standard Deviation
1	1295	440	9	1715	385
2	2005	435	10	1650	460
3	2445	580	11	1935	560
4	1900	345	12	1760	280
5	2570	290	13	2175	465
6	1980	510	14	1570	505
7	1990	445	15	1670	380
8	1990	315			

* Published by H.M. Stationery Office.

† E. S. Pearson, *Biometrika*, Vol. xxiii, pp. 114–33.

‡ These figures represent data of some years past of the General Electric Co. Ltd. of England.

shown below* that it is justifiable to assume there is no change in the standard deviation within a group of lamps manufactured at the same time, i.e. that the 15 values of s_i vary only through chance variations from a common σ . Further, in this case there is evidence that the distribution of length of life of a homogeneous group is near enough to normal for the application of the present test. We find

$$\eta^2 = .3449, \quad N = 75, \quad k = 15,$$

consequently have to enter the tables with

$$x = 1 - \eta^2 = .6551, \quad p = \frac{1}{2}(N - k) = 30, \quad q = \frac{1}{2}(k - 1) = 7.$$

As we require only to interpolate for x . We have:

x	$I_x(30,7)$
.63	$z_{s-2} = .00687$
.64	$z_{s-1} = .00951$
.65	$z_s = .01303$
.66	$z_{s+1} = .01766$
.67	$z_{s+2} = .02368$
.68	$z_{s+3} = .03142$

Applying our criterion (xlix), p. xlvii, we find its value to be .00010, this is less than .000427, or working the first line of (xlviii), p. xlvi, we shall have an answer correct to five decimal places,

$$\theta = .51, \quad \phi = .49, \quad \theta\phi = .2499, \quad 1 + \frac{1}{2}\theta\phi = 1.12495, \quad \frac{1}{6}\theta\phi = .04165.$$

$$z_{\theta,\phi} = .01731 - .00209 = .01522,$$

which is correct to five figures.

Accordingly if the difference in sample means was due to chance only, we should not expect an η^2 as large as the observed in more than 1% to 2% of trials. It is therefore not improbable that there were variations in the lamp quality from time to time, as measured by mean length of life.

Illustration 9. (Case $i = 2$.)

The table below shows the observed relationship between two variables in a sample of thirty. Is there any reason to question the hypothesis that the regression of y on x is linear in the population sampled†?

Scale of y Variate.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Totals
1	.	.	.	.	.	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	1	4
2	.	.	1	.	.	.	.	1	.	1	1	1	.	1	1	.	.	.	.	.	.	.	7
3	1	.	.	.	2	.	3	4	1	.	1	.	.	1	.	.	.	.	.	.	.	.	13
4	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
5	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	3
6	1	2	1	.	3	2	4	5	1	3	3	1	.	2	1	.	.	.	.	.	.	1	30

find

$$r = .439, \quad r^2 = .1925,$$

$$\eta = .572, \quad \eta^2 = .3270.$$

consequently the tables should be entered with

$$x = \frac{1}{1} \frac{\eta^2}{r^2} = .8334, \quad p = \frac{1}{2}(N - k) = 12.5, \quad q = \frac{1}{2}(k - 2) = 1.5.$$

For a bivariate interpolation.

The occurrence of p at a half unit and x to be interpolated suggests the modification of formula (viii) will give us a result correct to the fourth, if not to the fifth decimal place. We retain θ_0 and θ_1 , put $\chi_0 = .5$ and $\chi_1 = 0$. Hence we have the convenient formula

$$\begin{aligned} z_{\theta_0, .5, 1} &= \frac{1}{2} \{ \theta_0 (z_{000} + z_{010}) + \theta_1 (z_{100} + z_{110}) \} \\ &\quad - \frac{1}{12} \theta_0 \theta_1 \{ (1 + \theta_0) (\delta_x^2 z_{000} + \delta_x^2 z_{010}) + (1 + \theta_1) (\delta_x^2 z_{100} + \delta_x^2 z_{110}) \} \\ &\quad - \frac{1}{16} \{ \theta_0 (\delta_p^2 z_{000} + \delta_p^2 z_{010}) + \theta_1 (\delta_p^2 z_{100} + \delta_p^2 z_{110}) \} \end{aligned} \quad \text{.....(lix).}$$

p. lvii below.

† This table is taken from the experimental material referred to in *Biometrika*, Vol. xxi, pp. 346-9.

The final subscript 0 to the z 's merely signifies that the values of the z 's are to be sought under a constant q .
In the present illustration

$$\frac{1}{2}\theta_0 = .33, \quad \frac{1}{2}\theta_1 = .17, \quad \frac{1}{12}\theta_0\theta_1 = .0815, \quad \frac{1}{16}\theta_0 = .04125, \quad \frac{1}{16}\theta_1 = .02125.$$

The values required from the table are:

	z_{000}	z_{010}	z_{100}	z_{110}
Tabular values	.2068,222	.1766,323	.2338,525	.2020,264
$\delta_x^2 z$	26474	27613	28325	29970
$\delta_p^2 z$	47286	41685	45466	40640

and we have accordingly

$$z_{\theta_0, .5, 1} = .2006,394 - .0013,684 - .0005,500 \\ = .1987,210,$$

which is probably correct to the fifth decimal place*.

For many purposes the hyperbolic interpolation, i.e. the first line value in (lxix), which gives .2006, would be accurate enough.

Since we should expect in 2 samples in 10, or 1 in 5, x would have a smaller value, or the criterion $(\eta^2 - r^2)/(1 - \eta^2)$ a larger value, were the hypothesis of linear regression true, there seems no reason to reject it on the slender evidence available.

(v) *Test of the Significance of a Multiple Correlation Coefficient.*

Let R be the multiple correlation coefficient in a sample of N individuals, between a dependent variate x_0 and n independent variates x_1, x_2, \dots, x_n . If the independent variates in the population sampled are normally correlated and x_0 is normally distributed, but not correlated with them, then the distribution of R^2 in repeated samples of N takes the form

$$df = \frac{1}{B(\frac{1}{2}n, \frac{1}{2}(N-n-1))} (R^2)^{\frac{1}{2}(n-2)} (1-R^2)^{\frac{1}{2}(N-n-3)} d(R^2) \quad \dots\dots (lxx).$$

The table may therefore be entered with

$$x = 1 - R^2, \quad p = \frac{1}{2}(N-n-1), \quad q = \frac{1}{2}n,$$

and the chance of finding $R^2 \geq R_0^2$ becomes $I_{1-R_0^2}(\frac{1}{2}(N-n-1), \frac{1}{2}n)$, R being treated as always positive.

In this case as in (ii), when N is large, the required incomplete B-function ratio may lie outside the table, but n being small we can apply a Type III curve as in Section (i) above, and thus get a good approximation by taking out of the *Tables of the Incomplete Γ -Function* the values

$$I(u, \frac{1}{2}n),$$

where

$$u = \frac{N-n-3}{\sqrt{2n}} (1 - R_0^2) \quad \dots\dots (lxxi).$$

Corollary. In the special case of $n=1$, R becomes the ordinary bivariate product moment coefficient of correlation and we find for the sampling distribution of r

$$df = \frac{1}{B(\frac{1}{2}, \frac{1}{2}(N-2))} (r^2)^{-\frac{1}{2}} (1-r^2)^{\frac{1}{2}(N-4)} d(r^2) \quad \dots\dots (lxxii).$$

The chance of $r \geq r_0$ then becomes

$$\frac{1}{2} I_{1-r_0^2}(\frac{1}{2}(N-2), \frac{1}{2}).$$

Our table suffices for values of N up to 102. Beyond this value we have for our β_1, β_2 :

N	β_1	β_2
100	0	2.9406
200	0	2.9701
400	0	2.9850

which indicate the slow degree of approach to normal distributions.

Another way of entering the table is to take the chance of $r \geq r_0$ to be

$$1 - I_{\frac{1}{2}(1+r_0)}(\frac{1}{2}(N-2), \frac{1}{2}(N-2)).$$

* Using a δ^2 formula first to interpolate for x for $p=11, 12, 13$ and 14 , and, then interpolating for p from these four values, gave $q=.1997$, using z 's to four figures only.

Illustration 10. Suppose $N=102$, $r_0=.20$, then the chance of r exceeding .20 in a sample of 102 from a bivariate population of zero correlation is

$$1 - I_{.60}(50, 50) = 1 - .9780,696 = .0219,304.$$

Now suppose we endeavour to replace (lxxii) by a normal curve; we shall have

$$\begin{aligned} df &= \text{const.} \times (1-r^2)^{\frac{1}{2}(N-4)} dr \\ &= \text{const.} \times e^{-\frac{1}{2}r^2(N-4)} \end{aligned} \quad \text{.....(lxxiii),}$$

normal curve of standard deviation $\sigma = \frac{1}{\sqrt{N-4}} = \frac{1}{9.8994,949}$. The corresponding area for the normal

will be found by determining $\frac{1}{2}(1-\alpha)$ for $x=1.9798,9898$ and the probability integral will be .761,424 = .0238,578. Comparing the two values .02193 and .02386, we see that the normal curve will not be true value correct to the third decimal place; in this case the error is 2 in the second significant figure. While such agreement may for certain purposes be good enough for statisticians, it will not appeal to the mathematician. We must get nearer to the exact value 3 than $\beta_3=2.94$ before we can use a normal curve in such cases. The mathematician is therefore advised for the range $N=100$ to 200 to use Wishart's process of determining $\int_0^\theta \cos^p \theta d\theta$. That process is not very lengthy as we need only $\phi_0(x)$, $\phi_1(x)$ and $\phi_2(x)$ and the ratio is

$$I_0(p) = \sqrt{\frac{1}{2}p} \frac{\Gamma(\frac{1}{2}p)}{\Gamma(\frac{1}{2}(p+1))} \left\{ \phi_0(x) - \frac{1}{p} \phi_1(x) + \frac{1}{p^2} \phi_2(x) \dots \right\} \quad \text{.....(lxxiv),}$$

$x = 2\sqrt{p}(1 - \cos \theta)/\sin \theta$.

The factor may be found from tables of the complete Γ -function (*Tracts for Computers*, No. VIII). Tables of $\phi(x)$'s are given in the work cited below. In the case given above $r = \sin \theta = .20$ and $p = 99$. We have

$$x = 2.0102,826, \quad \text{External factor} = 1.0025,284,$$

$$\phi_0(x) = .4777,9936, \quad \frac{\phi_1(x)}{p} = .0009,3784, \quad \frac{\phi_2(x)}{p^2} = .0000,0259,$$

$\phi_3(x)/p^3$ contributes a unit in the eighth place. Thus the series in brackets is .4768,6410, or multiplying by external factor

$$I_0(p) = .4780,698.$$

Subtracting this from .5 we have for the desired answer .0219,302, which agrees to within two units in the sixth place with the value given by the B-function table. As we have only used 8^4 interpolation for $\phi_0(x)$, 8^4 interpolation for $\phi_1(x)$ and linear interpolation for $\phi_2(x)$, the seventh figure difference is explicable. Wishart's process is not too laborious when p is ≥ 100 , we strongly recommend it for symmetrical situations outside our table. After $p=400$, no doubt the normal probability integral table will suffice for the needs of many mathematicians.

Generalised "Student's" Test for Samples from an n Variate Normal Population.

Student's original z (or t) test[‡] was developed to measure in small samples the significance of the difference between a sample mean and a hypothetical parent population mean, when only the sample standard deviation is known. The test was later extended by R. A. Fisher[§] to deal with the difference between means of two samples. Recently H. Hotelling^{||} has shown that the result may be generalised still further to meet the case in which not one, but a number of correlated characters have been measured for each individual in the sample. Here a generalised criterion T' follows the sampling law

$$df = \frac{2}{n^{1/2} B(\frac{1}{2}(n-h+1), \frac{1}{2}h)} T'^{h-1} \left(1 + \frac{T'^2}{n}\right)^{-\frac{1}{2}(n+1)} dT' \quad \text{.....(lxxv),}$$

we take the value of (xliv) $\sigma^2 = pqb^2/(p+q)^2(p+q+1)$, and we have $\sigma^2 = 1/\sqrt{N-1}$, but the difference is of the order of infinity, when we use the normal curve.

Tables for Statisticians, Part II, pp. cxxii-cxxiv, Table XLVI. The factor outside the curled brackets is $\sqrt{\frac{p-1}{p}} c_0$,

c_0 is given in Table XLV for values of $p=101$ onwards.

Biometrika, Vol. VI, pp. 1-25.

Biometrika, Vol. V, No. 3, pp. 90-104.

Annals of Mathematical Statistics, Vol. II, pp. 359-378, 1931. See also S. S. Wilks, *Biometrika*, Vol. XXIV, pp. 487-488.

where there are h variable characters, and n represents the number of the degrees of freedom depending on the particular form of application. Here T may take a variety of forms for which reference must be made to Hotelling's paper. T itself lies between 0 and $+\infty$. One illustration of the use of (lxxv) may be cited here.

Case of a sample of N individuals from a normal population, each individual being measured for h correlated characters.

We have $n = \text{degrees of freedom} = N - 1$.

Let s_t be the standard deviation in the sample of the t th character, $r_{tt'}$ the correlation coefficient in the sample of the t th and t' th characters. Let R be the determinant

$$\begin{vmatrix} 1, & r_{12}, r_{13}, \dots, r_{1h} \\ r_{21}, & 1, & r_{23}, \dots, r_{2h} \\ r_{31}, r_{32}, & 1, & \dots, r_{3h} \\ \dots & \dots & \dots & \dots \\ r_{h1}, r_{h2}, r_{h3}, & \dots, & 1 \end{vmatrix}$$

where of course $r_{tt} = r_{tt}$.

Let $R_{tt'}$ be the minor corresponding to the constituent $r_{tt'}$, and m_t the population mean of the t th character.

Then
$$\frac{T^2}{n} = S \frac{R_{tt}}{R} \frac{(\bar{x}_t - m_t)^2}{s_t^2} + 2S \frac{R_{tt'}}{R} \frac{(\bar{x}_t - m_t)(\bar{x}_{t'} - m_{t'})}{s_t s_{t'}} \dots\dots (lxxv) \text{ bis,}$$

or $\frac{T^2}{n}$ takes the form familiar in the surface of multiple variation as the power of c^{-1} , when s_t the individual value, σ_t the population standard deviation and the $\rho_{tt'}$'s of the population are replaced by the sample mean \bar{x}_t , the sample standard deviation s_t and the sample correlations $r_{tt'}$.

In the case of two variates only

$$\frac{T^2}{n} = \frac{1}{1 - r_{12}^2} \left\{ \frac{(\bar{x}_1 - m_1)^2}{s_1^2} + \frac{(\bar{x}_2 - m_2)^2}{s_2^2} + 2 \frac{r_{12}(\bar{x}_1 - m_1)(\bar{x}_2 - m_2)}{s_1 s_2} \right\} \dots\dots (lxxv) \text{ ter.}$$

For the case of one variate, we have

$$\frac{T^2}{n} = \frac{(\bar{x} - m)^2}{s^2}, \text{ that is "Student's" } z\text{-test,}$$

and (lxxv) may be turned into the B-function type by the transformation

$$u = \frac{1}{1 + \frac{T^2}{n}} \dots\dots (lxxvi),$$

when we have

$$df = \frac{1}{B(\frac{1}{2}(n-h+1), \frac{1}{2}h)} u^{h(n-h-1)} (1-u)^{\frac{1}{2}(h-2)} du \dots\dots (lxxvii).$$

Thus the chance of $T^2 \geq T_0^2$ is the incomplete β -function ratio

$$I_{\frac{1}{1+\frac{T_0^2}{n}}}(\frac{1}{2}(n-h+1), \frac{1}{2}h).$$

It will be noted that if $h = 1$, or if we are dealing with the case of a single variable only we have the simple "Student's" distribution

$$df = \frac{1}{\sqrt{n} B(\frac{1}{2}n, \frac{1}{2})} \left(1 + \frac{t^2}{n}\right)^{-\frac{1}{2}(n+1)} dt \dots\dots (lxxviii),$$

or the chance of finding $t \geq t_0$ is $\frac{1}{2} I_u(\frac{1}{2}n, \frac{1}{2})$.

While the generalised T as defined by Hotelling is a positive quantity, the t of the special case $h = 1$ may be either positive or negative. Illustrations of applications in the case of $h = 1$ were considered in the Introduction to *Tables for Statisticians and Biometricians*, Part II, pp. cxxi-cxlili, with special tables for symmetrical distributions. It should be noted that in the work just referred to "Student's" original notation, i.e. z for $\frac{t}{\sqrt{n}}$, and n for the present $n + 1$, were adopted. "Student" in his original paper took

$z = \frac{\bar{x}_1 - \bar{x}}{s_1}$ in our present notation, and n for the size of the sample.

(c) *Tests relating to the Variance and Covariance when more than two Independent Samples are involved.*

test was applied to the lamp data in the *Illustration 1* of Section (ii) to discover whether the *mean* of life remained stable from one sampled batch of lamps to another; we may also ask whether the *variance* within a batch appears to remain stable; and the hypothesis that it does was a necessary assumption in the method adopted in dealing with our illustration as to the means.

new form of test is involved; in Section (i) a comparison of *two* samples was made, but we now require to test the hypothesis that a number, say k , of samples have been drawn from populations with a common variance, σ^2 , it being assumed that the populations sampled are normal, or approximately so.

Suppose that the t th sample ($t=1, 2, 3, \dots k$) contains n_t observations and has a standard deviation s_t . J. Neyman and E. S. Pearson* have given a test based on the principle of likelihood. The criterion of the test may be defined as

$$L = \frac{N \sqrt{\prod_{t=1}^{t=k} (s_t^2)^{n_t}}}{\frac{1}{N} \sum_{t=1}^{t=k} (n_t s_t^2)} \quad \text{.....(lxxix),}$$

where $\sum_{t=1}^{t=k} S$ denoting a summation as to arrays, and Π denoting a continuous product. It is clear

that L denotes the ratio of the weighted geometric mean to the weighted arithmetic mean of the s_t^2 's.

As L decreases from 1 towards 0, the hypothesis of a common σ^2 becomes less and less likely. When the population is normal the moment coefficients of the sampling distribution of L (if the hypothesis be true) have been found.

In the simple case in which the groups contain the same number of individuals, i.e. when

$$n_t = \text{constant} = n = N/k,$$

the moment coefficient of L about $L=0$ is

$$\mu'_n = k^n \left\{ \frac{\Gamma(\frac{1}{2}(n-1) + n/k)}{\Gamma(\frac{1}{2}(n-1))} \right\}^k \frac{\Gamma(\frac{1}{2}(N-k))}{\Gamma(\frac{1}{2}(N-k) + n)} \quad \text{.....(lxxx).}$$

Reasons are given in the paper just referred to for believing that the distribution of L may in many cases be adequately represented by a Type I distribution of the form

$$df = \frac{1}{B(p, q)} L^{p-1} (1-L)^{q-1} dL \quad \text{.....(lxxxii)}$$

giving the correct mean and standard deviation. In this case p and q may be determined from the first two moment coefficients μ'_1 and μ'_2 , thus

$$p = \frac{\mu'_1 (\mu'_1 - \mu'_2)}{\mu'_2 - \mu_1'^2}, \quad q = \frac{(1 - \mu'_1) (\mu'_1 - \mu'_2)}{\mu'_2 - \mu_1'^2} \quad \text{.....(lxxxii).}$$

In a recent paper S. S. Wilks has generalised still further this result, applying it to cases where several uncorrelated characters have been measured for each individual in a number of samples. The sampling distributions of the test criteria were again expressed in terms of products of Γ -functions, and it seems not unlikely that the same method of approximation, using (lxxxii) and (lxxxii), will be again adequate.

Illustration 11. Let us take the lamp data already considered in Section (ii). The 15 values of s_t are given in Table IV on p. lii. In this case

$$N = 75, \quad k = 15, \quad n = 5,$$

using the formula (lxxxii) we find

$$\mu'_1 = .77946, \quad \mu'_2 = .61273,$$

$$p = 25.12, \quad q = 7.11,$$

inserting the observed values of s_t into (lxxix) gives

$$L = .9138.$$

lviii RELATION OF FISHER'S TEST TO THE INCOMPLETE B-FUNCTION TEST

We have accordingly to determine

$$I_{.9138}(25 \cdot 12, 7 \cdot 11).$$

$$\begin{aligned} \theta_0 &= .62, \theta_1 = .38; & \phi_0 &= .88, \phi_1 = .12; & \chi_0 &= .78, \chi_1 = .22. \\ z_{000} &= .9817,981, & z_{100} &= .9900,699, \\ z_{010} &= .9784,655, & z_{110} &= .9881,496, \\ z_{001} &= .9891,785, & z_{101} &= .9944,177, \\ z_{011} &= .9870,109, & z_{111} &= .9932,401, \\ \theta_0 \phi_0 \chi_0 &= .425,568, & \theta_1 \phi_0 \chi_0 &= .260,832, \\ \theta_0 \phi_1 \chi_0 &= .058,032, & \theta_1 \phi_1 \chi_0 &= .035,568, \\ \theta_0 \phi_0 \chi_1 &= .120,032, & \theta_1 \phi_0 \chi_1 &= .073,568, \\ \theta_0 \phi_1 \chi_1 &= .016,368, & \theta_1 \phi_1 \chi_1 &= .010,032. \end{aligned}$$

Whence by continuous operation on the machine the hyperbolic terms of (viii) give

$$I_{.9138}(25 \cdot 12, 7 \cdot 11) = .986,0026.$$

The terms in δ^2 would somewhat reduce this value below .986, but it would be safe to say that if the variance were constant among the sampled batches of lamps, we should expect to find greater diversity than that observed among the 15 values of s_i^2 (as measured by L) in 984 to 986 times in 1000 repetitions of the trials.

The variance of these lamps as tested by this L criterion appears therefore rather unusually stable.

(viii) *Relation of the Incomplete B-Function Ratio Method to R. A. Fisher's Method and Table.*

It may be helpful to some users of the present tables to indicate here the relationship between the Type I distribution leading to the Incomplete B-Function Integral and R. A. Fisher's frequency distribution for which he has provided tables of the 5% and 1% probability limits*. The close relation of the tests described above can be shown to arise from the fact that in each case a comparison is made of two independent estimates of an unknown variance, σ^2 , in a population about the nature of which certain restrictions are made. If the hypothesis to be tested be true, then these two estimates will differ only through chance fluctuations: if the test shows that the estimates differ significantly, then we shall conclude that the hypothesis is not true.

If the following notation be adopted:

First estimate of $\sigma_1 : v_1$, based on u_1 degrees of freedom.

Second estimate of $\sigma_2 : v_2$, based on u_2 degrees of freedom.

Then if $w = \frac{1}{2} \log_e (v_1/v_2)$ and if the hypothesis to be tested be true, the sampling distribution of w takes the form

$$df = \frac{2u_1^{\frac{1}{2}} u_2^{\frac{1}{2}}}{B(\frac{1}{2}u_1, \frac{1}{2}u_2)} \frac{e^{u_1 w}}{(u_2 + u_1 e^{2w})^{\frac{1}{2}(u_1 + u_2)}} dw \quad \text{.....(lxxxiii).}$$

The transformation

$$w = \frac{1}{2} \log_e (v_1/v_2) = \frac{1}{2} \log_e \frac{u_2 x}{u_1 (1-x)} \quad \text{.....(lxxxiv),}$$

or

$$x = \frac{u_1 e^{2w}}{u_2 + u_1 e^{2w}} = \frac{u_1 v_1}{u_2 v_2 + u_1 v_1} \quad \text{.....(lxxxv),}$$

gives us the probability law for x †,

$$df = \frac{1}{B(\frac{1}{2}u_1, \frac{1}{2}u_2)} x^{\frac{1}{2}u_1-1} (1-x)^{\frac{1}{2}u_2-1} dx \quad \text{.....(lxxxvi).}$$

As w varies from $-\infty$ to $+\infty$, x varies from 0 to 1 and the chance of $w \geq w_0$ will be identical with

$$I_{x_0}(\frac{1}{2}u_1, \frac{1}{2}u_2), \text{ where } x_0 \text{ corresponds to } w_0.$$

We may illustrate the relationship in the following cases.

* *Metron*, Vol. v, pp. 90-104.

† The 1% and 2% levels of the incomplete B-function are given by Woo's Tables, *Biometrika*, Vol. xxi, pp. 1-66, or *Tables for Statisticians*, Part II, pp. 16-72.

the test in Section (i):

$$\left. \begin{aligned} v_1 &= \sum_{t=1}^{t_1} \frac{n_1}{n_1-1} (x_{t1} - \bar{x}_1)^2 / (n_1 - 1) = n_1 s_1^2 / (n_1 - 1), & u_1 &= n_1 - 1 \\ v_2 &= \sum_{t=1}^{t_2} \frac{n_2}{n_2-1} (x_{t2} - \bar{x}_2)^2 / (n_2 - 1) = n_2 s_2^2 / (n_2 - 1), & u_2 &= n_2 - 1 \end{aligned} \right\} \dots\dots(\text{lxxxvii}).$$

the tests in Section (ii):

$$\left. \begin{aligned} v_1 &= \sum_{t=1}^t \frac{S}{n_t} (y_t - Y)^2 / (k - 1) \dots & u_1 &= k - 1 \\ v_2 &= \sum_{t=1}^t \frac{S}{N-k} (y - \bar{y})^2 / (N - k) = \sum_{t=1}^t \frac{S}{N-k} (n_t s_t^2) / (N - k) & u_2 &= N - k \end{aligned} \right\} \dots\dots(\text{lxxxviii}),$$

giving a summation of all y 's in an array and S the summation for all arrays.

Our tables* give only the values of w which will be surpassed in 5 % and in 1 % of samples, if the hypothesis tested be true. These limits are tabled for

$$u_1 = 1, 2, \dots 6; 8, 12, 24, \infty,$$

$$u_2 = 1, 2, \dots 30; 60, \infty,$$

other values of the w 's being chosen to form a framework at equidistant values of $1/u$ from which to interpolate.

In sampling tests a knowledge of the 5 % and 1 % limits may in some cases suffice, but, especially in the case of the relative probability of different hypotheses, an exact value of the probability is often desirable. The Incomplete B-Function Table provides within its range, and as the degrees of freedom are integers, the interpolation will be for p and q at most to half intervals, and may be achieved by diagonal interpolation, if not provided by the table itself.

Concluding Remarks. There are of course many other purposes to which the *Tables of the Incomplete B-Function* may be applied by either statistician or mathematician. The Editor has found the tables of value in such problems as the following:

The summing of the first p terms of any binomial, and therefore of any consecutive series of terms.

The summing of first p terms of $(1+x)^n = (1+x)^n I_{1+x}^{(n+1-p, p)}$. See *Biometrika*, Vol. xvi, pp. 202-203.

The summing of first p terms of $(1-x)^{-n} = (1-x)^{-n} I_{1-x}^{(n, p)}$. See *Biometrika*, Vol. xxv, pp. 160-161.

The discussion of whether two χ^2 's, namely χ_1^2 and χ_2^2 , may be considered as significantly different in terms of the ratio χ_1^2/χ_2^2 . A special table drawn from the Incomplete B-Function Table has been provided for this. See *Biometrika*, Vol. xxiv, pp. 305-307, 347-350.

The evaluating of the probability integrals of symmetrical frequency distributions such as occur in the case of the regression coefficient, or approximately in the case of the mean of an array in a sample, when that mean is found from the regression line of the sample. A special table drawn from the Incomplete B-Function Table has been provided for such cases. See *Biometrika*, Vol. xxii, pp. 253-283, *Tables for Statisticians*, Part II, pp. 169-178.

The determination of the probability integrals of a great variety of statistical constants which are required for the application of the P_{λ_n} test for randomness. See *Biometrika*, Vol. xxv, pp. 379-410.

The above mentioned special tables while to some extent shortening the work are far from absolute necessities for those possessing the more comprehensive *Tables of the Incomplete Γ - and B-Functions*.

Statistical Methods for Research Workers. Fisher's notation is z for our w and n_1 and n_2 for the number of degrees of freedom; we have here used to avoid confusion with the n_1 and n_2 used by us for the size of samples. z in this Introduction has also a special meaning.

TABLES OF THE INCOMPLETE BETA-FUNCTION

TABLE I THE $I_a(p, q)$ FUNCTION

The corresponding value of the Complete Beta-Function
is given at the top of each column

TABLES OF THE INCOMPLETE β -FUNCTION $x = .01$ to $.60$ $q = 0.5$ $p = 0.5$ to 3

	$p = 0.5$	$p = 1$	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$
$B(p, q) = 3.14159245^+$	2.00000000	1.57079633	1.33333333	1.17809725^-	1.06666667	
x						
.01	.0637 686	.0050 126	.0004 257	.0000 376	.0000 034	.0000 003
.02	.0903 345	.0100 505 ⁺	.0012 077	.0001 510	.0000 193	.0000 025
.03	.1108 247	.0151 142	.0022 255	.0003 409	.0000 535 ⁺	.0000 085
.04	.1281 884	.0202 041	.0034 369	.0006 082	.0001 102	.0000 203
.05	.1435 663	.0253 206	.0048 182	.0009 536	.0001 933	.0000 398
.06	.1575 424	.0304 640	.0063 536	.0013 779	.0003 061	.0000 601
.07	.1704 634	.0356 349	.0080 318	.0018 821	.0004 517	.0001 101
.08	.1825 549	.0408 337	.0098 443	.0024 670	.0006 330	.0001 650
.09	.1939 734	.0460 608	.0117 844	.0031 335 ⁺	.0008 531	.0002 350
.10	.2048 328	.0513 167	.0138 468	.0038 825 ⁺	.0011 144	.0003 250
.11	.2152 190	.0566 019	.0160 272	.0047 150	.0014 198	.0004 343
.12	.2251 989	.0619 168	.0183 220	.0056 319	.0017 718	.0005 662
.13	.2348 255	.0672 621	.0207 281	.0066 341	.0021 729	.0007 220
.14	.2441 418	.0726 382	.0232 430	.0077 228	.0026 257	.0009 067
.15	.2531 833	.0780 456	.0258 646	.0088 990	.0031 327	.0011 200
.16	.2619 798	.0834 849	.0285 911	.0101 636	.0036 963	.0013 651
.17	.2705 563	.0889 566	.0314 210	.0115 180	.0043 190	.0016 445
.18	.2789 343	.0944 615	.0343 530	.0129 630	.0050 032	.0019 607
.19	.2871 326	.1000 000 ⁰	.0373 861	.0145 000 ⁰	.0057 515 ⁺	.0023 162
.20	.2951 672	.1055 728	.0405 193	.0161 301	.0065 663	.0027 137
.21	.3030 525 ⁺	.1111 806	.0437 521	.0178 545 ⁺	.0074 500	.0031 557
.22	.3108 011	.1168 239	.0470 837	.0196 745 ⁺	.0084 052	.0036 449
.23	.3184 242	.1225 036	.0505 139	.0215 915	.0094 344	.0041 841
.24	.3259 319	.1282 202	.0540 424	.0236 066	.0105 400	.0047 762
.25	.3333 333	.1339 746	.0576 680	.0257 214	.0117 248	.0054 240
.26	.3406 367	.1397 675	.0613 934	.0279 372	.0129 913	.0061 304
.27	.3478 494	.1455 996	.0652 160	.0302 556	.0143 420	.0068 684
.28	.3549 784	.1514 719	.0691 369	.0326 779	.0157 798	.0077 312
.29	.3620 301	.1573 850 ⁺	.0731 562	.0352 059	.0173 072	.0086 319
.30	.3690 101	.1633 400	.0772 743	.0378 410	.0189 271	.0096 037
.31	.3759 240	.1693 376	.0814 916	.0405 849	.0206 423	.0106 499
.32	.3827 767	.1753 789	.0858 087	.0434 395	.0224 556	.0117 740
.33	.3895 729	.1814 647	.0902 262	.0464 064	.0243 699	.0129 705
.34	.3963 171	.1875 962	.0947 447	.0494 875 ⁺	.0263 883	.0142 698
.35	.4030 133	.1937 742	.0993 650 ⁺	.0526 847	.0285 138	.0156 487
.36	.4096 655 ⁺	.2000 000 ⁰	.1040 880	.0560 000 ⁰	.0307 494	.0171 200 ⁰
.37	.4162 774	.2062 746	.1089 147	.0594 354	.0330 985 ⁺	.0186 875 ⁺
.38	.4228 526	.2125 992	.1138 459	.0629 931	.0355 643	.0203 553
.39	.4293 943	.2189 750 ⁺	.1188 830	.0666 752	.0381 501	.0221 275
.40	.4359 058	.2254 033	.1240 271	.0704 840	.0408 594	.0240 082
.41	.4423 902	.2318 854	.1292 794	.0744 219	.0436 958	.0260 019
.42	.4488 506	.2384 227	.1346 415	.0784 915	.0466 629	.0281 131
.43	.4552 897	.2450 166	.1401 147	.0826 951	.0497 646	.0303 465
.44	.4617 105 ⁺	.2516 685 ⁺	.1457 008	.0870 356	.0530 046	.0327 067
.45	.4681 157	.2583 802	.1514 014	.0915 157	.0563 871	.0351 980
.46	.4745 080	.2651 531	.1572 183	.0961 383	.0599 161	.0378 282
.47	.4808 899	.2719 890	.1631 535 ⁺	.1009 064	.0635 961	.0405 998
.48	.4872 642	.2788 897	.1692 091	.1058 233	.0674 314	.0435 194
.49	.4936 334	.2858 572	.1753 872	.1108 922	.0714 267	.0465 925 ⁺
.50	.5000 000 ⁰	.2928 932	.1816 901	.1161 165 ⁺	.0755 868	.0498 253
.51	.5063 666	.3000 000 ⁰	.1881 204	.1215 000 ⁰	.0799 167	.0532 237
.52	.5127 358	.3071 797	.1946 807	.1270 464	.0844 215 ⁺	.0567 944
.53	.5191 101	.3144 345 ⁺	.2013 737	.1327 597	.0891 068	.0605 439
.54	.5254 920	.3217 670	.2082 024	.1386 441	.0939 781	.0644 793
.55	.5318 843	.3291 796	.2151 699	.1447 040	.0990 414	.0686 078
.56	.5382 895	.3366 750 ⁺	.2222 797	.1509 441	.1043 027	.0729 370
.57	.5447 103	.3442 561	.2295 352	.1573 691	.1097 687	.0774 750
.58	.5511 494	.3519 259	.2369 403	.1639 844	.1154 461	.0822 299
.59	.5576 098	.3596 876	.2444 990	.1707 954	.1213 421	.0872 106
.60	.5640 942	.3675 445	.2522 155	.1778 078	.1274 640	.0924 263

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

3

 $x = .61$ to 1.00 $q = 0.5$ $p = 0.5$ to 3

	$p = 0.5$	$p = 1$	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$
$I_3(p, q) = 3.14159245^+$	2.000000000^a	1.57079633	1.33333333	1.17809725^-	1.06666667	
x						
.61	.5706 057	.3755 002	.2600 945 ⁻	.1850 278	.1338 109	.0978 866
.62	.5771 474	.3835 586	.2681 408	.1924 618	.1404 181	.1036 017
.63	.5837 226	.3917 237	.2763 598	.2001 167	.1472 674	.1095 824
.64	.5903 345 ⁻	.4000 000 ^a	.2847 570	.2080 000 ^a	.1543 773	.1158 400 ^a
.65	.5969 867	.4083 920	.2933 384	.2161 194	.1617 575 ⁻	.1223 865 ⁺
.66	.6036 820	.4169 048	.3021 105 ⁺	.2244 834	.1694 187	.1292 348
.67	.6104 271	.4255 437	.3110 804	.2331 009	.1773 722	.1363 984
.68	.6172 233	.4343 146	.3202 554	.2419 815 ⁺	.1856 299	.1438 917
.69	.6240 760	.4432 236	.3296 437	.2511 357	.1942 048	.1517 302
.70	.6309 899	.4522 774	.3392 541	.2605 745 ⁺	.2031 107	.1599 305 ⁺
.71	.6379 699	.4614 835 ⁺	.3490 960	.2703 102	.2123 624	.1685 104
.72	.6450 216	.4708 497	.3591 800	.2803 556	.2219 760	.1774 888
.73	.6521 506	.4803 848	.3695 172	.2907 252	.2319 690	.1868 866
.74	.6593 633	.4900 980	.3801 201	.3014 343	.2423 601	.1967 260
.75	.6666 667	.5000 000 ^a	.3910 022	.3125 000 ^a	.2531 700	.2070 312
.76	.6740 681	.5101 021	.4021 785 ⁻	.3239 408	.2644 211	.2178 289
.77	.6815 758	.5204 168	.4136 655 ⁻	.3357 773	.2761 382	.2291 480
.78	.6891 989	.5309 584	.4254 815 ⁻	.3480 322	.2883 484	.2410 204
.79	.6969 475 ⁻	.5417 424	.4376 470	.3607 307	.3010 821	.2534 812
.80	.7048 328	.5527 864	.4501 849	.3739 010	.3143 726	.2665 697
.81	.7128 674	.5641 101	.4631 209	.3875 747	.3282 578	.2803 294
.82	.7210 657	.5757 359	.4764 843	.4017 877	.3427 799	.2948 095 ⁻
.83	.7294 437	.5876 804	.4903 085 ⁻	.4165 806	.3579 870	.3100 653
.84	.7380 202	.6000 000 ^a	.5046 316	.4320 000 ^a	.3739 339	.3261 600 ^a
.85	.7468 167	.6127 017	.5194 980	.4480 999	.3906 840	.3431 662
.86	.7558 582	.6258 343	.5349 594	.4649 430	.4083 108	.3611 681
.87	.7651 745 ⁺	.6394 449	.5510 771	.4826 034	.4269 006	.3802 643
.88	.7748 011	.6535 808	.5679 242	.5011 694	.4465 564	.4005 719
.89	.7847 810	.6683 375 ⁺	.5855 892	.5207 477	.4674 020	.4222 315 ⁺
.90	.7951 672	.6837 722	.6041 813	.5414 697	.4895 897	.4454 156
.91	.8060 266	.7000 000 ^a	.6238 377	.5635 000 ^a	.5133 097	.4703 387
.92	.8174 451	.7171 573	.6447 345 ⁻	.5870 496	.5388 053	.4972 754
.93	.8295 306	.7354 249	.6671 040	.6123 974	.5663 973	.5265 858
.94	.8424 576	.7550 510	.6912 688	.6390 250 ⁺	.5965 238	.5587 612
.95	.8564 337	.7763 032	.7176 856	.6701 800	.6298 119	.5945 030
.96	.8718 116	.8000 000 ^a	.7470 601	.7040 000 ^a	.6672 191	.6348 800 ^a
.97	.8891 753	.8267 949	.7805 761	.7427 905 ⁻	.7103 486	.6816 772
.98	.9096 655 ⁺	.8585 786	.8205 388	.7892 822	.7623 093	.7383 493
.99	.9362 314	.9000 000 ^a	.8728 886	.8505 000 ^a	.8310 823	.8137 462
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .02$ to $.60$ $q = 0.5$ $p = 3.5$ to 6

	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$
$B(p, q) = .9817\ 4770$	$.9142\ 8571$	$.8590\ 2924$	$.8126\ 9841$	$.7731\ 2432$	$.7388\ 1674$	
x						
.02	.0000 003					
.03	.0000 014	.0000 002				
.04	.0000 038	.0000 007	.0000 001			
.05	.0000 083	.0000 017	.0000 004	.0000 001		
.06	.0000 158	.0000 036	.0000 008	.0000 002		
.07	.0000 272	.0000 068	.0000 017	.0000 004	.0000 001	
.08	.0000 435 ⁺	.0000 116	.0000 031	.0000 008	.0000 002	.0000 001
.09	.0000 660	.0000 186	.0000 053	.0000 015 ⁺	.0000 004	.0000 001
.10	.0000 958	.0000 285 ⁺	.0000 085 ⁺	.0000 026	.0000 008	.0000 002
.11	.0001 344	.0000 419	.0000 132	.0000 042	.0000 013	.0000 004
.12	.0001 830	.0000 596	.0000 196	.0000 065 ⁻	.0000 021	.0000 007
.13	.0002 432	.0000 825 ⁺	.0000 282	.0000 097	.0000 033	.0000 012
.14	.0003 166	.0001 115 ⁻	.0000 395 ⁺	.0000 141	.0000 050 ⁺	.0000 018
.15	.0004 049	.0001 476	.0000 542	.0000 200	.0000 074	.0000 028
.16	.0005 098	.0001 920	.0000 728	.0000 277	.0000 106	.0000 041
.17	.0006 331	.0002 458	.0000 960	.0000 377	.0000 140	.0000 059
.18	.0007 769	.0003 104	.0001 248	.0000 505 ⁻	.0000 205 ⁻	.0000 083
.19	.0009 431	.0003 872	.0001 600	.0000 664	.0000 277	.0000 116
.20	.0011 338	.0004 776	.0002 025 ⁻	.0000 863	.0000 369	.0000 159
.21	.0013 512	.0005 834	.0002 535 ⁻	.0001 107	.0000 486	.0000 214
.22	.0015 978	.0007 061	.0003 141	.0001 404	.0000 630	.0000 284
.23	.0018 757	.0008 477	.0003 856	.0001 763	.0000 809	.0000 373
.24	.0021 876	.0010 101	.0004 694	.0002 192	.0001 028	.0000 484
.25	.0025 360	.0011 953	.0005 670	.0002 703	.0001 294	.0000 622
.26	.0029 236	.0014 055 ⁺	.0006 800	.0003 306	.0001 614	.0000 791
.27	.0033 532	.0016 430	.0008 101	.0004 015 ⁻	.0001 998	.0000 998
.28	.0038 278	.0019 103	.0009 593	.0004 842	.0002 454	.0001 248
.29	.0043 503	.0022 098	.0011 295 ⁺	.0005 802	.0002 993	.0001 519
.30	.0049 238	.0025 444	.0013 230	.0006 913	.0003 627	.0001 910
.31	.0055 517	.0029 167	.0015 419	.0008 191	.0004 369	.0002 339
.32	.0062 372	.0033 299	.0017 887	.0009 656	.0005 234	.0002 846
.33	.0069 839	.0037 871	.0020 661	.0011 328	.0006 236	.0003 444
.34	.0077 954	.0042 914	.0023 769	.0013 229	.0007 393	.0004 145 ⁺
.35	.0086 754	.0048 466	.0027 239	.0015 384	.0008 723	.0004 963
.36	.0096 279	.0054 560 ^e	.0031 104	.0017 818	.0010 248	.0005 914
.37	.0106 569	.0061 236	.0035 397	.0020 560	.0011 990	.0007 015 ⁺
.38	.0117 666	.0068 534	.0040 154	.0023 640	.0013 972	.0008 286
.39	.0129 614	.0076 494	.0045 412	.0027 088	.0016 222	.0009 747
.40	.0142 458	.0085 163	.0051 211	.0030 941	.0018 767	.0011 421
.41	.0156 244	.0094 584	.0057 593	.0035 234	.0021 640	.0013 334
.42	.0171 021	.0104 807	.0064 602	.0040 008	.0024 873	.0015 514
.43	.0186 841	.0115 882	.0072 287	.0045 304	.0028 502	.0017 990
.44	.0203 755 ⁺	.0127 861	.0080 697	.0051 167	.0032 568	.0020 796
.45	.0221 819	.0140 801	.0089 885 ⁺	.0057 646	.0037 112	.0023 968
.46	.0241 090	.0154 760	.0099 907	.0064 792	.0042 179	.0027 546
.47	.0261 625 ⁺	.0169 797	.0110 821	.0072 660	.0047 819	.0031 570
.48	.0283 488	.0185 978	.0122 691	.0081 307	.0054 084	.0036 090
.49	.0306 742	.0203 368	.0135 582	.0090 797	.0061 032	.0041 153
.50	.0331 455 ⁺	.0222 039	.0149 564	.0101 196	.0068 723	.0046 816
.51	.0357 696	.0242 063	.0164 710	.0112 573	.0077 223	.0053 137
.52	.0385 538	.0263 519	.0181 098	.0125 005 ⁺	.0086 602	.0060 181
.53	.0415 056	.0286 487	.0198 811	.0138 572	.0096 936	.0068 017
.54	.0446 332	.0311 052	.0217 936	.0153 359	.0108 305 ⁺	.0076 720
.55	.0479 448	.0337 304	.0238 564	.0169 456	.0120 798	.0086 372
.56	.0514 491	.0365 338	.0260 793	.0186 962	.0134 508	.0097 060
.57	.0551 552	.0395 252	.0284 726	.0205 978	.0149 534	.0108 880
.58	.0590 728	.0427 152	.0310 472	.0226 615 ⁺	.0165 985 ⁻	.0121 935 ⁻
.59	.0632 120	.0461 148	.0338 148	.0248 990	.0183 976	.0136 335 ⁻
.60	.0675 833	.0497 356	.0367 875 ⁻	.0273 229	.0203 631	.0152 201

TABLE I. THE $I_x(p, q)$ FUNCTION

5

 $x = .61$ to 1.00 $q = 0.5$ $p = 3.5$ to 6

	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$
$B(p, q)$	.0817 4770	.0142 8571	.8590 2924	.8126 9841	.7731 2432	.7388 1674
x						
.61	.0721 970	.0535 890	.0309 784	.0299 465 ⁻	.0225 083	.0169 663
.62	.0770 676	.0576 907	.0434 014	.0327 810	.0248 475 ⁺	.0188 860
.63	.0822 040	.0620 519	.0470 711	.0358 507	.0273 902	.0209 946
.64	.0876 228	.0666 880 ⁺	.0510 033	.0391 629	.0301 708	.0233 084
.65	.0933 354	.0716 146	.0552 145 ⁺	.0427 380	.0331 891	.0258 452
.66	.0993 574	.0768 481	.0597 227	.0465 947	.0364 704	.0286 243
.67	.1057 046	.0824 061	.0645 469	.0507 532	.0400 352	.0316 664
.68	.1123 936	.0883 074	.0697 074	.0552 348	.0439 059	.0349 944
.69	.1194 425 ⁺	.0945 721	.0752 260	.0600 628	.0481 065 ⁺	.0380 326
.70	.1268 704	.1012 215 ⁺	.0811 262	.0652 622	.0526 631	.0426 079
.71	.1346 977	.1082 788	.0874 332	.0708 600	.0576 040	.0469 493
.72	.1429 466	.1157 687	.0941 741	.0768 851	.0629 597	.0516 885 ⁻
.73	.1516 408	.1237 181	.1013 783	.0833 692	.0687 636	.0568 600
.74	.1608 062	.1321 558	.1090 777	.0903 466	.0750 519	.0625 017
.75	.1704 707	.1411 133	.1173 068	.0978 546	.0818 642	.0680 550 ⁺
.76	.1806 646	.1506 247	.1261 033	.1059 339	.0892 440	.0753 654
.77	.1914 214	.1607 275 ⁺	.1355 083	.1146 292	.0972 389	.0826 831
.78	.2027 774	.1714 627	.1455 671	.1239 896	.1059 013	.0906 634
.79	.2147 730	.1828 753	.1563 205 ⁻	.1340 690	.1152 891	.0993 677
.80	.2274 528	.1950 155 ⁺	.1678 507	.1449 276	.1254 669	.1088 643
.81	.2408 665 ⁻	.2079 389	.1801 920	.1566 321	.1365 063	.1192 294
.82	.2550 607	.2217 077	.1931 221	.1692 572	.1484 877	.1305 487
.83	.2701 255 ⁻	.2363 922	.2076 183	.1828 871	.1615 019	.1429 189
.84	.2861 051	.2520 720 ⁺	.2228 683	.1976 173	.1750 516	.1564 496
.85	.3030 905 ⁺	.2688 382	.2392 724	.2135 568	.1910 543	.1712 665 ⁻
.86	.3211 765 ⁺	.2867 961	.2569 461	.2308 312	.2078 455 ⁺	.1875 144
.87	.3404 738	.3060 685 ⁺	.2760 240	.2495 869	.2261 829	.2053 619
.88	.3611 134	.3268 003	.2966 650 ⁺	.2699 963	.2462 521	.2250 075 ⁻
.89	.3832 528	.3491 653	.3190 589	.2922 651	.2682 745 ⁻	.2466 879
.90	.4070 838	.3733 749	.3434 364	.3166 429	.2925 185 ⁻	.2706 900
.91	.4328 453	.3996 915 ⁻	.3700 831	.3434 386	.3193 155 ⁻	.2973 674
.92	.4608 414	.4284 484	.3993 614	.3730 427	.3490 843	.3271 668
.93	.4914 709	.4600 818	.4317 438	.4059 641	.3823 694	.3606 677
.94	.5252 755 ⁺	.4951 828	.4678 698	.4428 896	.4199 041	.3986 496
.95	.5630 278	.5345 921	.5086 465 ⁻	.4847 912	.4627 245 ⁻	.4422 114
.96	.6059 013	.5795 840 ⁺	.5554 454	.5331 354	.5123 898	.4930 037
.97	.6558 521	.6322 773	.6105 421	.5903 492	.5714 749	.5537 459
.98	.7166 574	.6967 541	.6783 097	.6610 862	.6449 047	.6296 271
.99	.7979 717	.7834 244	.7698 750 ⁻	.7571 581	.7451 499	.7337 548
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .10$ to $.70$ $q = 0.5$ $p = 6.5$ to 9

	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$B(p, q) =$	.7086 9912	.6819 8468	.6580 7776	.6365 1904	.6169 4790	.5990 7674
x						
.10	.0000 001					
.11	.0000 001					
.12	.0000 002	.0000 001				
.13	.0000 004	.0000 001				
.14	.0000 007	.0000 002	.0000 001			
.15	.0000 010	.0000 004	.0000 001	.0000 001		
.16	.0000 016	.0000 006	.0000 002	.0000 001		
.17	.0000 023	.0000 009	.0000 004	.0000 001	.0000 001	
.18	.0000 034	.0000 014	.0000 006	.0000 002	.0000 001	.0000 001
.19	.0000 049	.0000 021	.0000 009	.0000 004	.0000 002	.0000 001
.20	.0000 068	.0000 030	.0000 013	.0000 006	.0000 002	
.21	.0000 094	.0000 042	.0000 019	.0000 008	.0000 004	.0000 002
.22	.0000 128	.0000 058	.0000 026	.0000 012	.0000 005 ⁺	.0000 003
.23	.0000 172	.0000 080	.0000 037	.0000 017	.0000 008	.0000 004
.24	.0000 228	.0000 108	.0000 051	.0000 024	.0000 012	.0000 006
.25	.0000 300	.0000 145 ⁻	.0000 070	.0000 034	.0000 017	.0000 008
.26	.0000 389	.0000 192	.0000 095 ⁻	.0000 047	.0000 023	.0000 012
.27	.0000 500 ⁻	.0000 251	.0000 126	.0000 064	.0000 032	.0000 016
.28	.0000 637	.0000 325 ⁺	.0000 167	.0000 086	.0000 044	.0000 023
.29	.0000 804	.0000 419	.0000 218	.0000 114	.0000 060	.0000 031
.30	.0001 008	.0000 534	.0000 283	.0000 151	.0000 080	.0000 043
.31	.0001 255 ⁺	.0000 676	.0000 364	.0000 197	.0000 107	.0000 058
.32	.0001 553	.0000 849	.0000 465 ⁺	.0000 255 ⁺	.0000 140	.0000 077
.33	.0001 908	.0001 060	.0000 590	.0000 329	.0000 184	.0000 103
.34	.0002 331	.0001 314	.0000 742	.0000 420	.0000 238	.0000 135 ⁺
.35	.0002 832	.0001 620	.0000 929	.0000 533	.0000 307	.0000 177
.36	.0003 423	.0001 986	.0001 155 ⁻	.0000 672	.0000 392	.0000 229
.37	.0004 116	.0002 421	.0001 427	.0000 843	.0000 499	.0000 295 ⁺
.38	.0004 928	.0002 938	.0001 755 ⁻	.0001 050 ⁺	.0000 630	.0000 378
.39	.0005 873	.0003 547	.0002 147	.0001 302	.0000 791	.0000 481
.40	.0006 970	.0004 264	.0002 614	.0001 605 ⁺	.0000 988	.0000 608
.41	.0008 239	.0005 103	.0003 168	.0001 970	.0001 227	.0000 765 ⁺
.42	.0009 703	.0006 084	.0003 822	.0002 406	.0001 517	.0000 958
.43	.0011 386	.0007 224	.0004 593	.0002 925 ⁺	.0001 866	.0001 192
.44	.0013 316	.0008 547	.0005 497	.0003 542	.0002 286	.0001 477
.45	.0015 522	.0010 076	.0006 554	.0004 271	.0002 788	.0001 822
.46	.0018 038	.0011 840	.0007 787	.0005 131	.0003 387	.0002 238
.47	.0020 900	.0013 868	.0009 221	.0006 142	.0004 098	.0002 738
.48	.0024 147	.0016 194	.0010 882	.0007 326	.0004 940	.0003 335 ⁺
.49	.0027 823	.0018 855 ⁻	.0012 803	.0008 709	.0005 934	.0004 048
.50	.0031 977	.0021 892	.0015 018	.0010 320	.0007 103	.0004 896
.51	.0036 661	.0025 351	.0017 565 ⁺	.0012 192	.0008 476	.0005 901
.52	.0041 931	.0029 281	.0020 489	.0014 361	.0010 082	.0007 088
.53	.0047 850 ⁺	.0033 739	.0023 836	.0016 869	.0011 957	.0008 487
.54	.0054 487	.0038 784	.0027 661	.0019 762	.0014 140	.0010 132
.55	.0061 916	.0044 483	.0032 021	.0023 090	.0016 676	.0012 059
.56	.0070 217	.0050 911	.0036 984	.0026 913	.0019 614	.0014 314
.57	.0079 480	.0058 147	.0042 621	.0031 294	.0023 012	.0016 945 ⁻
.58	.0089 801	.0066 280	.0049 013	.0036 305 ⁺	.0026 933	.0020 007
.59	.0101 284	.0075 407	.0056 248	.0042 027	.0031 449	.0023 564
.60	.0114 043	.0085 635 ⁺	.0064 425 ⁺	.0048 549	.0036 639	.0027 688
.61	.0128 203	.0097 082	.0073 652	.0055 970	.0042 595 ⁻	.0032 450
.62	.0143 899	.0109 874	.0084 049	.0064 400	.0049 416	.0037 968
.63	.0161 278	.0124 152	.0095 748	.0073 963	.0057 217	.0044 320
.64	.0180 501	.0140 071	.0108 895 ⁺	.0084 795 ⁻	.0066 123	.0051 620
.65	.0201 741	.0157 799	.0123 651	.0097 048	.0076 277	.0060 028
.66	.0225 190	.0177 521	.0140 194	.0110 890	.0087 836	.0069 663
.67	.0251 054	.0199 440	.0158 718	.0126 510	.0100 978	.0080 700
.68	.0279 559	.0223 778	.0179 442	.0144 114	.0115 901	.0093 327
.69	.0310 952	.0250 780	.0202 603	.0163 933	.0132 826	.0107 755 ⁻
.70	.0345 503	.0280 714	.0228 466	.0186 226	.0152 002	.0124 219

TABLE I. THE $I_w(p, q)$ FUNCTION

7

 $x = .71$ to 1.00 $q = 0.5$ $p = 6.5$ to 9

	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$B(p, q)$	.7086 9912	.6819 8468	.6580 7776	.6365 1904	.6169 4790	.5990 7674
x						
.71	.0383 506	.0313 875 ⁻	.0257 323	.0211 278	.0173 705 ⁻	.0142 986
.72	.0425 285 ⁻	.0350 587	.0289 496	.0239 405 ⁺	.0198 245 ⁺	.0164 358
.73	.0471 192	.0391 209	.0325 343	.0270 964	.0225 970	.0188 671
.74	.0521 618	.0436 136	.0365 260	.0306 347	.0257 270	.0216 307
.75	.0576 988	.0485 803	.0400 600	.0345 997	.0292 580	.0247 696
.76	.0637 776	.0540 694	.0459 120	.0390 404	.0332 393	.0283 323
.77	.0704 503	.0601 345 ⁻	.0514 098	.0440 122	.0377 260	.0323 739
.78	.0777 746	.0668 352	.0575 234	.0495 768	.0427 805 ⁻	.0369 566
.79	.0858 147	.0742 382	.0643 210	.0558 039	.0484 730	.0421 510
.80	.0946 423	.0824 179	.0718 796	.0627 720	.0548 834	.0480 375 ⁺
.81	.1043 378	.0914 580	.0802 856	.0705 608	.0621 022	.0547 079
.82	.1149 913	.1014 529	.0896 370	.0792 984	.0702 325 ⁺	.0622 672
.83	.1267 050	.1125 097	.1000 452	.0890 728	.0793 927	.0708 361
.84	.1395 951	.1247 504	.1116 375 ⁺	.1000 251	.0897 187	.0805 539
.85	.1537 948	.1383 153	.1245 605 ⁻	.1123 074	.1013 679	.0915 823
.86	.1694 578	.1533 663	.1389 839	.1260 965 ⁺	.1145 234	.1041 103
.87	.1867 031	.1700 924	.1551 060	.1415 997	.1294 004	.1183 603
.88	.2059 217	.1887 165 ⁻	.1731 610	.1590 616	.1462 536	.1345 963
.89	.2271 852	.2095 046	.1934 288	.1787 752	.1653 885 ⁻	.1531 354
.90	.2508 583	.2327 788	.2162 484	.2010 959	.1871 760	.1743 635 ⁻
.91	.2773 168	.2589 365 ⁻	.2420 379	.2264 623	.2120 743	.1987 577
.92	.3070 344	.2884 781	.2713 244	.2554 269	.2406 613	.2269 203
.93	.3406 256	.3220 524	.3047 901	.2887 054	.2736 849	.2596 310
.94	.3789 153	.3605 294	.3433 496	.3272 500	.3121 466	.2979 337
.95	.4230 646	.4051 315 ⁺	.3882 859	.3724 217	.3574 488	.3432 896
.96	.4748 140	.4576 879	.4415 160	.4262 064	.4116 810	.3978 730
.97	.5370 247	.5211 995 ⁺	.5061 785 ⁻	.4918 845 ⁻	.4782 524	.4652 262
.98	.6151 439	.6013 664	.5882 217	.5756 491	.5635 970	.5520 214
.99	.7228 973	.7125 164	.7025 619	.6929 921	.6837 719	.6748 712
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .21$ to $.80$ $q = 0.5$ $p = 9.5$ to 13

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$B(p, q) =$	.5826 7301	.5675 4639	.5535 3936	.5405 2037	.5170 1948	.4963 3870
x						
.21	.0000 001					
.22	.0000 001	.0000 001				
.23	.0000 002	.0000 001				
.24	.0000 003	.0000 001	.0000 001			
.25	.0000 004	.0000 002	.0000 001			
.26	.0000 006	.0000 003	.0000 001	.0000 001		
.27	.0000 008	.0000 004	.0000 002	.0000 001		
.28	.0000 012	.0000 006	.0000 003	.0000 002		
.29	.0000 016	.0000 009	.0000 005 ⁻	.0000 002	.0000 001	
.30	.0000 023	.0000 012	.0000 007	.0000 004	.0000 001	
.31	.0000 031	.0000 017	.0000 009	.0000 005 ⁺	.0000 002	
.32	.0000 043	.0000 024	.0000 013	.0000 007	.0000 002	.0000 001
.33	.0000 058	.0000 032	.0000 018	.0000 010	.0000 003	.0000 001
.34	.0000 077	.0000 044	.0000 025 ⁻	.0000 014	.0000 005 ⁻	.0000 002
.35	.0000 102	.0000 059	.0000 034	.0000 020	.0000 007	.0000 002
.36	.0000 134	.0000 079	.0000 046	.0000 027	.0000 009	.0000 003
.37	.0000 175 ⁺	.0000 104	.0000 062	.0000 037	.0000 013	.0000 005
.38	.0000 227	.0000 137	.0000 082	.0000 050 ⁻	.0000 018	.0000 007
.39	.0000 293	.0000 179	.0000 109	.0000 067	.0000 025 ⁻	.0000 009
.40	.0000 375 ⁺	.0000 232	.0000 143	.0000 089	.0000 034	.0000 013
.41	.0000 478	.0000 299	.0000 187	.0000 117	.0000 046	.0000 018
.42	.0000 605 ⁺	.0000 383	.0000 243	.0000 154	.0000 062	.0000 025 ⁺
.43	.0000 763	.0000 489	.0000 313	.0000 201	.0000 083	.0000 034
.44	.0000 956	.0000 619	.0000 402	.0000 261	.0000 110	.0000 047
.45	.0001 193	.0000 782	.0000 513	.0000 337	.0000 146	.0000 063
.46	.0001 481	.0000 981	.0000 651	.0000 432	.0000 191	.0000 085 ⁻
.47	.0001 831	.0001 227	.0000 822	.0000 552	.0000 249	.0000 113
.48	.0002 255 ⁺	.0001 526	.0001 034	.0000 701	.0000 324	.0000 150 ⁻
.49	.0002 766	.0001 891	.0001 295 ⁻	.0000 887	.0000 418	.0000 197
.50	.0003 379	.0002 334	.0001 615 ⁻	.0001 118	.0000 537	.0000 259
.51	.0004 113	.0002 870	.0002 005 ⁻	.0001 402	.0000 687	.0000 338
.52	.0004 989	.0003 516	.0002 480	.0001 751	.0000 875 ⁺	.0000 439
.53	.0006 032	.0004 291	.0003 056	.0002 179	.0001 110	.0000 567
.54	.0007 268	.0005 220	.0003 753	.0002 701	.0001 402	.0000 730
.55	.0008 732	.0006 330	.0004 593	.0003 336	.0001 764	.0000 936
.56	.0010 459	.0007 651	.0005 602	.0004 106	.0002 211	.0001 194
.57	.0012 492	.0009 220	.0006 812	.0005 037	.0002 761	.0001 518
.58	.0014 880	.0011 079	.0008 257	.0006 160	.0003 436	.0001 922
.59	.0017 678	.0013 276	.0009 980	.0007 509	.0004 262	.0002 426
.60	.0020 948	.0015 866	.0012 029	.0009 128	.0005 269	.0003 950 ⁺
.61	.0024 764	.0018 914	.0014 460	.0011 065 ⁻	.0006 494	.0003 822
.62	.0029 207	.0022 491	.0017 336	.0013 375 ⁺	.0007 980	.0004 774
.63	.0034 370	.0026 682	.0020 734	.0016 126	.0009 778	.0005 945 ⁺
.64	.0040 359	.0031 582	.0024 738	.0019 394	.0011 948	.0007 381
.65	.0047 295 ⁻	.0037 301	.0029 448	.0023 268	.0014 561	.0009 137
.66	.0055 313	.0043 964	.0034 977	.0027 851	.0017 700	.0011 279
.67	.0064 568	.0051 713	.0041 457	.0033 263	.0021 463	.0013 887
.68	.0075 235 ⁻	.0060 711	.0049 037	.0039 642	.0025 965 ⁺	.0017 053
.69	.0087 513	.0071 145 ⁻	.0057 892	.0047 147	.0031 341	.0020 890
.70	.0101 626	.0083 225 ⁺	.0068 218	.0055 964	.0037 749	.0025 530
.71	.0117 829	.0097 193	.0080 244	.0066 306	.0045 373	.0031 129
.72	.0136 410	.0113 325 ⁺	.0094 231	.0078 419	.0054 429	.0037 876
.73	.0157 696	.0131 934	.0110 479	.0092 587	.0065 170	.0045 989
.74	.0182 057	.0153 378	.0129 330	.0109 139	.0077 891	.0055 730
.75	.0209 915 ⁺	.0178 066	.0151 179	.0128 454	.0092 937	.0067 409
.76	.0241 746	.0206 463	.0176 480	.0150 970	.0110 712	.0081 391
.77	.0278 093	.0239 103	.0205 753	.0177 192	.0131 687	.0098 108
.78	.0319 575 ⁻	.0276 597	.0239 598	.0207 707	.0156 415 ⁺	.0118 075 ⁻
.79	.0366 896	.0319 644	.0278 706	.0243 194	.0185 543	.0141 897
.80	.0420 863	.0369 048	.0323 874	.0284 440	.0219 830	.0170 296

TABLE I. THE $I_x(p, q)$ FUNCTION

9

 $x = .81$ to 1.00 $q = 0.5$ $p = 9.5$ to 13

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$B(p, q)$	.5826 7301	.5675 4639	.5535 3936	.5405 2037	.5170 1948	.4963 3870
x						
.81	.0482 400	.0425 736	.0376 025 ⁺	.0332 362	.0260 167	.0204 125 ⁺
.82	.0552 568	.0490 775 ⁻	.0436 231	.0388 027	.0307 603	.0244 403
.83	.0632 595 ⁺	.0565 405 ⁻	.0505 737	.0452 684	.0363 378	.0292 343
.84	.0723 000	.0651 067	.0586 000	.0527 709	.0428 960	.0349 395 ⁻
.85	.0828 138	.0749 447	.0678 729	.0615 098	.0506 093	.0417 298
.86	.0947 249	.0862 527	.0785 943	.0716 629	.0596 861	.0498 152
.87	.1083 520	.0992 653	.0910 038	.0834 832	.0703 770	.0594 496
.88	.1230 679	.1142 629	.1053 887	.0972 642	.0829 853	.0709 434
.89	.1410 006	.1315 837	.1220 966	.1133 617	.0978 814	.0846 779
.90	.1625 500 ⁻	.1516 409	.1415 531	.1322 131	.1155 229	.1011 275 ⁺
.91	.1864 114	.1749 472	.1642 873	.1543 630	.1364 828	.1208 898
.92	.2141 107	.2021 512	.1909 698	.1805 030	.1614 919	.1447 305 ⁻
.93	.2464 587	.2340 939	.2224 710	.2115 320	.1915 031	.1736 523
.94	.2845 412	.2719 021	.2599 578	.2486 559	.2277 976	.2090 079
.95	.3298 768	.3171 516	.3050 620	.2935 620	.2721 706	.2526 955 ⁻
.96	.3847 242	.3721 840	.3602 077	.3487 557	.3272 869	.3075 355 ⁺
.97	.4527 575 ⁻	.4408 042	.4293 290	.4182 993	.3974 618	.3780 016
.98	.5408 843	.5301 526	.5197 973	.5097 927	.4907 470	.4728 599
.99	.6662 641	.6579 282	.6498 437	.6419 932	.6269 347	.6126 479
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .34$ to 1.00 $q = 0.5$ $p = 14$ to 19

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$B(p, q) =$	.4779 5579	.4614 7455 ⁺	.4465 8828	.4330 5530	.4206 8229	.4093 1250 ⁻
x						
.34	.0000 001					
.35	.0000 001					
.36	.0000 001					
.37	.0000 002	.0000 001				
.38	.0000 002	.0000 001				
.39	.0000 004	.0000 001				
.40	.0000 005 ⁺	.0000 002	.0000 001			
.41	.0000 007	.0000 003	.0000 001			
.42	.0000 010	.0000 004	.0000 002	.0000 001		
.43	.0000 014	.0000 006	.0000 002	.0000 001		
.44	.0000 020	.0000 008	.0000 004	.0000 002	.0000 001	
.45	.0000 027	.0000 012	.0000 005 ⁺	.0000 002	.0000 001	
.46	.0000 038	.0000 017	.0000 007	.0000 003	.0000 001	.0000 001
.47	.0000 051	.0000 023	.0000 011	.0000 005 ⁻	.0000 002	.0000 001
.48	.0000 069	.0000 032	.0000 015 ⁺	.0000 007	.0000 003	.0000 002
.49	.0000 093	.0000 044	.0000 021	.0000 010	.0000 005 ⁻	.0000 002
.50	.0000 125 ⁺	.0000 061	.0000 029	.0000 014	.0000 007	.0000 003
.51	.0000 166	.0000 082	.0000 041	.0000 020	.0000 010	.0000 005 ⁻
.52	.0000 220	.0000 111	.0000 056	.0000 028	.0000 014	.0000 007
.53	.0000 291	.0000 149	.0000 077	.0000 040	.0000 020	.0000 011
.54	.0000 381	.0000 199	.0000 104	.0000 055 ⁻	.0000 029	.0000 015 ⁺
.55	.0000 497	.0000 265 ⁺	.0000 141	.0000 076	.0000 041	.0000 022
.56	.0000 646	.0000 351	.0000 191	.0000 104	.0000 057	.0000 031
.57	.0000 837	.0000 462	.0000 256	.0000 142	.0000 079	.0000 044
.58	.0001 078	.0000 606	.0000 341	.0000 192	.0000 109	.0000 061
.59	.0001 384	.0000 791	.0000 453	.0000 260	.0000 149	.0000 086
.60	.0001 770	.0001 029	.0000 600	.0000 350 ⁻	.0000 204	.0000 120
.61	.0002 255 ⁺	.0001 333	.0000 790	.0000 469	.0000 278	.0000 166
.62	.0002 863	.0001 721	.0001 036	.0000 625 ⁻	.0000 377	.0000 228
.63	.0003 624	.0002 213	.0001 354	.0000 830	.0000 509	.0000 313
.64	.0004 571	.0002 836	.0001 763	.0001 098	.0000 685 ⁻	.0000 427
.65	.0005 747	.0003 622	.0002 287	.0001 447	.0000 916	.0000 581
.66	.0007 204	.0004 611	.0002 957	.0001 899	.0001 221	.0000 787
.67	.0009 006	.0005 852	.0003 810	.0002 484	.0001 622	.0001 060
.68	.0011 226	.0007 405 ⁻	.0004 893	.0003 238	.0002 146	.0001 424
.69	.0013 956	.0009 342	.0006 264	.0004 207	.0002 830	.0001 906
.70	.0017 305 ⁺	.0011 753	.0007 997	.0005 449	.0003 719	.0002 541
.71	.0021 406	.0014 748	.0010 179	.0007 036	.0004 871	.0003 376
.72	.0026 416	.0018 459	.0012 922	.0009 059	.0006 360	.0004 471
.73	.0032 525 ⁺	.0023 048	.0016 360	.0011 631	.0008 280	.0005 601
.74	.0039 962	.0028 711	.0020 662	.0014 892	.0010 748	.0007 767
.75	.0048 999	.0035 685 ⁺	.0026 033	.0019 019	.0013 914	.0010 101
.76	.0059 964	.0044 261	.0032 724	.0024 231	.0017 965 ⁺	.0013 330
.77	.0073 247	.0054 788	.0041 048	.0030 799	.0023 139	.0017 405
.78	.0089 319	.0067 691	.0051 384	.0039 061	.0029 732	.0022 658
.79	.0108 743	.0083 486	.0064 199	.0049 438	.0038 120	.0029 427
.80	.0132 192	.0102 798	.0080 067	.0062 450 ⁺	.0048 771	.0038 132
.81	.0160 478	.0126 386	.0099 692	.0078 745 ⁺	.0062 278	.0049 310
.82	.0194 573	.0155 171	.0123 939	.0099 129	.0079 383	.0063 641
.83	.0235 652	.0190 278	.0153 874	.0124 602	.0101 021	.0081 993
.84	.0285 131	.0233 077	.0190 809	.0156 413	.0128 371	.0105 470
.85	.0344 726	.0285 243	.0236 368	.0196 122	.0162 919	.0135 480
.86	.0416 527	.0348 837	.0292 563	.0245 681	.0206 548	.0173 828
.87	.0503 085 ⁺	.0426 397	.0361 903	.0307 546	.0261 647	.0222 824
.88	.0607 541	.0521 077	.0447 526	.0384 823	.0331 268	.0285 448
.89	.0733 788	.0636 817	.0553 390	.0481 460	.0419 325 ⁺	.0365 561
.90	.0886 700	.0778 587	.0684 528	.0602 521	.0530 885 ⁻	.0468 204
.91	.1072 459	.0952 734	.0847 416	.0754 572	.0672 568	.0600 018
.92	.1299 031	.1167 490	.1050 507	.0946 246	.0853 147	.0769 875 ⁻
.93	.1576 897	.1433 745 ⁺	.1305 053	.1189 109	.1084 452	.0989 825 ⁻
.94	.1920 248	.1766 309	.1626 429	.1499 051	.1382 837	.1276 631
.95	.2349 057	.2186 090	.2036 432	.1898 700	.1771 703	.1654 407
.96	.2893 035 ⁺	.2724 259	.2567 635 ⁻	.2421 974	.2286 252	.2159 579
.97	.3600 252	.3431 267	.3272 815 ⁺	.3123 920	.2983 739	.2851 541
.98	.4560 048	.4400 767	.4249 874	.4106 621	.3970 362	.3840 537
.99	.5990 480	.5860 650 ⁻	.5736 402	.5617 240	.5502 740	.5392 534
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$B(p, q)$	.3988 1731	.3890 9006	.3800 4145 ⁻	.3715 9608	.3636 8978	.3562 6754
x						
.48	.0000 001					
.49	.0000 001	.0000 001				
.50	.0000 002	.0000 001				
.51	.0000 002	.0000 001	.0000 001			
.52	.0000 004	.0000 002	.0000 001			
.53	.0000 005 ⁺	.0000 003	.0000 001	.0000 001		
.54	.0000 008	.0000 004	.0000 002	.0000 001	.0000 001	
.55	.0000 012	.0000 006	.0000 003	.0000 002	.0000 001	.0000 001
.56	.0000 017	.0000 009	.0000 005 ⁺	.0000 003	.0000 002	.0000 001
.57	.0000 024	.0000 014	.0000 008	.0000 004	.0000 002	.0000 001
.58	.0000 035 ⁻	.0000 020	.0000 011	.0000 006	.0000 004	.0000 002
.59	.0000 050 ⁻	.0000 029	.0000 017	.0000 010	.0000 006	.0000 003
.60	.0000 070	.0000 041	.0000 024	.0000 014	.0000 008	.0000 005 ⁻
.61	.0000 090	.0000 059	.0000 035 ⁺	.0000 021	.0000 013	.0000 008
.62	.0000 138	.0000 084	.0000 051	.0000 031	.0000 019	.0000 011
.63	.0000 193	.0000 119	.0000 073	.0000 045 ⁺	.0000 028	.0000 017
.64	.0000 267	.0000 167	.0000 105 ⁻	.0000 066	.0000 041	.0000 026
.65	.0000 369	.0000 234	.0000 149	.0000 095 ⁻	.0000 061	.0000 039
.66	.0000 507	.0000 327	.0000 211	.0000 137	.0000 088	.0000 057
.67	.0000 694	.0000 455 ⁻	.0000 298	.0000 196	.0000 129	.0000 085 ⁻
.68	.0000 946	.0000 629	.0000 419	.0000 279	.0000 186	.0000 124
.69	.0001 285 ⁻	.0000 867	.0000 586	.0000 396	.0000 268	.0000 182
.70	.0001 738	.0001 190	.0000 816	.0000 560	.0000 384	.0000 264
.71	.0002 342	.0001 627	.0001 131	.0000 787	.0000 548	.0000 382
.72	.0003 146	.0002 216	.0001 562	.0001 103	.0000 779	.0000 550 ⁺
.73	.0004 211	.0003 008	.0002 150 ⁺	.0001 539	.0001 102	.0000 790
.74	.0005 618	.0004 068	.0002 949	.0002 139	.0001 553	.0001 128
.75	.0007 473	.0005 485 ⁻	.0004 030	.0002 963	.0002 180	.0001 605 ⁺
.76	.0009 910	.0007 372	.0005 488	.0004 090	.0003 050 ⁻	.0002 276
.77	.0013 106	.0009 878	.0007 452	.0005 627	.0004 251	.0003 215 ⁻
.78	.0017 285 ⁺	.0013 109	.0010 088	.0007 716	.0005 907	.0004 525 ⁻
.79	.0022 740	.0017 589	.0013 617	.0010 551	.0008 181	.0006 348
.80	.0029 845	.0023 380	.0018 332	.0014 385 ⁺	.0011 297	.0008 877
.81	.0039 082	.0031 004	.0024 617	.0019 561	.0015 555 ⁺	.0012 378
.82	.0051 072	.0041 023	.0032 980	.0026 534	.0021 363	.0017 211
.83	.0066 615 ⁻	.0054 170	.0044 087	.0035 908	.0029 267	.0023 870
.84	.0086 739	.0071 398	.0058 819	.0048 492	.0040 007	.0033 027
.85	.0112 772	.0093 952	.0078 335 ⁺	.0065 363	.0054 577	.0045 599
.86	.0146 429	.0123 456	.0104 169	.0087 959	.0074 322	.0062 838
.87	.0189 937	.0162 040	.0138 348	.0118 204	.0101 060	.0086 455 ⁻
.88	.0246 188	.0212 593	.0183 565 ⁺	.0158 679	.0137 256	.0118 796
.89	.0318 971	.0278 542	.0243 417	.0212 866	.0186 267	.0163 087
.90	.0413 275 ⁻	.0365 075 ⁻	.0322 728	.0285 482	.0252 680	.0223 790
.91	.0535 734	.0478 690	.0428 032	.0382 974	.0342 862	.0307 120
.92	.0695 281	.0628 370	.0568 277	.0514 249	.0465 623	.0421 819
.93	.0904 137	.0826 441	.0755 903	.0691 794	.0633 468	.0580 356
.94	.1179 424	.1090 335 ⁻	.1008 584	.0933 485 ⁻	.0864 426	.0800 864
.95	.1545 908	.1445 411	.1352 212	.1265 685 ⁺	.1185 272	.1110 470
.96	.2041 173	.1930 344	.1826 482	.1729 041	.1637 531	.1551 511
.97	.2726 684	.2608 599	.2496 785 ⁺	.2390 790	.2290 210	.2194 680
.98	.3716 657	.3598 289	.3485 051	.3376 600	.3272 628	.3172 858
.99	.5286 301	.5183 759	.5084 660	.4988 782	.4895 926	.4805 913
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .68$ to 1.00 $q = 0.5$ $p = 38$ to 43

	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$B(p, q) = .2884\ 7734$		$.2847\ 3088$	$.2811\ 2669$	$.2776\ 5599$	$.2743\ 1074$	$.2710\ 8355$
x						
.68	.0000 001					
.69	.0000 001	.0000 001	.0000 001			
.70	.0000 002	.0000 001	.0000 001	.0000 001		
.71	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.72	.0000 006	.0000 005	.0000 003	.0000 002	.0000 002	.0000 001
.73	.0000 011	.0000 008	.0000 006	.0000 004	.0000 003	.0000 002
.74	.0000 019	.0000 014	.0000 010	.0000 007	.0000 005 ⁺	.0000 004
.75	.0000 031	.0000 023	.0000 017	.0000 013	.0000 010	.0000 007
.76	.0000 053	.0000 040	.0000 030	.0000 022	.0000 017	.0000 013
.77	.0000 089	.0000 068	.0000 051	.0000 039	.0000 030	.0000 023
.78	.0000 148	.0000 114	.0000 088	.0000 068	.0000 052	.0000 040
.79	.0000 245 ⁺	.0000 192	.0000 150 ⁻	.0000 117	.0000 091	.0000 071
.80	.0000 405 ⁻	.0000 320	.0000 253	.0000 200	.0000 158	.0000 125 ¹
.81	.0000 664	.0000 531	.0000 425 ⁺	.0000 341	.0000 273	.0000 219
.82	.0001 084	.0000 878	.0000 712	.0000 577	.0000 468	.0000 380
.83	.0001 762	.0001 445 ⁺	.0001 186	.0000 973	.0000 799	.0000 650
.84	.0002 852	.0002 368	.0001 967	.0001 634	.0001 358	.0001 128
.85	.0004 599	.0003 865 ⁻	.0003 248	.0002 731	.0002 396	.0001 931
.86	.0007 391	.0006 284	.0005 344	.0004 546	.0003 868	.0003 292
.87	.0011 839	.0010 184	.0008 762	.0007 541	.0006 402	.0005 590
.88	.0018 911	.0016 456	.0014 324	.0012 471	.0010 860	.0009 459
.89	.0030 139	.0026 528	.0023 355 ⁺	.0020 567	.0018 116	.0015 960
.90	.0047 945 ⁺	.0042 681	.0038 004	.0033 848	.0030 152	.0026 860
.91	.0076 187	.0068 587	.0061 760	.0055 625 ⁺	.0050 110	.0045 152
.92	.0121 029	.0110 175 ⁻	.0100 317	.0091 361	.0083 223	.0075 824
.93	.0192 416	.0177 105 ⁻	.0163 048	.0150 138	.0138 279	.0127 381
.94	.0306 608	.0285 325 ⁻	.0265 575 ⁻	.0247 242	.0230 219	.0214 409
.95	.0490 735 ⁻	.0461 689	.0434 449	.0408 894	.0384 914	.0362 403
.96	.0791 535 ⁺	.0752 859	.0716 206	.0681 459	.0648 509	.0617 253
.97	.1293 941	.1244 282	.1196 731	.1151 184	.1107 541	.1065 712
.98	.2168 109	.2108 239	.2050 319	.1994 266	.1940 004	.1887 461
.99	.3836 977	.3774 712	.3713 860	.3654 370	.3596 193	.3539 283
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .63$ to 1.00 $q = 0.5$ $p = 32$ to 37

	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$
$B(p, q)$	.3145 5482	.3007 1551	.3050 0280	.3000 7126	.2904 3645 [†]	.2023 7568
x						
.63	.0000 001					
.64	.0000 001	.0000 001				
.65	.0000 002	.0000 001	.0000 001			
.66	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001	
.67	.0000 005	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.68	.0000 007	.0000 005	.0000 003	.0000 002	.0000 002	.0000 001
.69	.0000 012	.0000 008	.0000 006	.0000 004	.0000 003	.0000 002
.70	.0000 019	.0000 013	.0000 009	.0000 006	.0000 004	.0000 003
.71	.0000 031	.0000 022	.0000 015 [†]	.0000 011	.0000 007	.0000 005 [†]
.72	.0000 049	.0000 035	.0000 025	.0000 018	.0000 013	.0000 009
.73	.0000 078	.0000 056	.0000 040	.0000 029	.0000 021	.0000 015 [†]
.74	.0000 122	.0000 089	.0000 063 [†]	.0000 048	.0000 035	.0000 025 [†]
.75	.0000 192	.0000 142	.0000 105	.0000 078	.0000 057	.0000 043
.76	.0000 298	.0000 223	.0000 167	.0000 126	.0000 094	.0000 071
.77	.0000 462	.0000 350 [†]	.0000 266	.0000 202	.0000 154	.0000 117
.78	.0000 711	.0000 547	.0000 421	.0000 324	.0000 250	.0000 192
.79	.0001 092	.0000 851	.0000 663	.0000 517	.0000 403	.0000 314
.80	.0001 668	.0001 316	.0001 039	.0000 820	.0000 648	.0000 512
.81	.0002 539	.0002 029	.0001 621	.0001 296	.0001 037	.0000 829
.82	.0003 850	.0003 114	.0002 520	.0002 040	.0001 651	.0001 338
.83	.0005 817	.0004 763	.0003 901	.0003 196	.0002 620	.0002 148
.84	.0008 759	.0007 259	.0006 018	.0004 991	.0004 149	.0003 436
.85	.0013 150	.0011 029	.0009 253	.0007 766	.0006 519	.0005 475
.86	.0019 687	.0016 797	.0014 184	.0012 045 [†]	.0010 232	.0008 695
.87	.0029 402	.0025 245 [†]	.0021 684	.0018 631	.0016 013	.0013 767
.88	.0043 819	.0038 062	.0033 073	.0028 747	.0024 995	.0021 738
.89	.0065 199	.0057 286	.0050 350 [†]	.0044 268	.0038 933	.0034 250 [†]
.90	.0096 897	.0086 110	.0076 549	.0068 070	.0060 548	.0053 872
.91	.0143 930	.0129 356	.0116 294	.0104 582	.0094 077	.0084 650
.92	.0213 844	.0194 350 [†]	.0176 687	.0160 676	.0146 156	.0132 984
.93	.0318 120	.0292 347	.0268 742	.0247 112	.0227 283	.0209 099
.94	.0474 497	.0440 809	.0409 795	.0380 987	.0354 294	.0329 552
.95	.0711 046	.0668 614	.0627 753	.0590 067	.0554 777	.0521 717
.96	.1073 812	.1020 001	.0969 127	.0921 005	.0875 468	.0832 360
.97	.1642 933	.1578 009	.1515 986	.1456 708	.1400 031	.1345 817
.98	.2573 552	.2499 948	.2428 909	.2360 314	.2294 051	.2230 016
.99	.4243 560	.4171 535 [†]	.4101 312	.4032 812	.3965 967	.3900 799
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .68$ to 1.00 $q = 0.5$ $p = 38$ to 43

	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$B(p, q) =$	.2884 7734	.2847 3088	.2811 2669	.2776 5599	.2743 1074	.2710 8355
x						
.68	.0000 001					
.69	.0000 001	.0000 001	.0000 001			
.70	.0000 002	.0000 001	.0000 001	.0000 001		
.71	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.72	.0000 006	.0000 005	.0000 003	.0000 002	.0000 002	.0000 001
.73	.0000 011	.0000 008	.0000 006	.0000 004	.0000 003	.0000 002
.74	.0000 019	.0000 014	.0000 010	.0000 007	.0000 005 ⁺	.0000 004
.75	.0000 031	.0000 023	.0000 017	.0000 013	.0000 010	.0000 007
.76	.0000 053	.0000 040	.0000 030	.0000 022	.0000 017	.0000 013
.77	.0000 089	.0000 068	.0000 051	.0000 039	.0000 030	.0000 023
.78	.0000 148	.0000 114	.0000 088	.0000 068	.0000 052	.0000 040
.79	.0000 245 ⁺	.0000 192	.0000 150 ⁻	.0000 117	.0000 091	.0000 071
.80	.0000 405 ⁻	.0000 320	.0000 253	.0000 200	.0000 158	.0000 125 ⁺
.81	.0000 664	.0000 531	.0000 425 ⁺	.0000 341	.0000 273	.0000 219
.82	.0001 084	.0000 878	.0000 712	.0000 577	.0000 468	.0000 380
.83	.0001 762	.0001 445 ⁺	.0001 186	.0000 973	.0000 799	.0000 656
.84	.0002 852	.0002 368	.0001 967	.0001 634	.0001 358	.0001 128
.85	.0004 599	.0003 865 ⁻	.0003 248	.0002 731	.0002 296	.0001 931
.86	.0007 391	.0006 284	.0005 344	.0004 546	.0003 868	.0003 292
.87	.0011 839	.0010 184	.0008 762	.0007 541	.0006 402	.0005 500
.88	.0018 911	.0016 456	.0014 324	.0012 471	.0010 860	.0009 459
.89	.0030 139	.0026 528	.0023 355 ⁺	.0020 567	.0018 116	.0015 960
.90	.0047 945 ⁺	.0042 681	.0038 004	.0033 848	.0030 152	.0026 866
.91	.0076 187	.0068 587	.0061 760	.0055 625 ⁺	.0050 110	.0045 152
.92	.0121 029	.0110 175 ⁻	.0100 317	.0091 361	.0083 223	.0075 824
.93	.0192 416	.0177 105 ⁻	.0163 048	.0150 138	.0138 279	.0127 381
.94	.0306 608	.0285 325 ⁻	.0265 575 ⁻	.0247 242	.0230 219	.0214 400
.95	.0490 735 ⁻	.0461 689	.0434 449	.0408 804	.0384 914	.0362 403
.96	.0791 535 ⁺	.0752 859	.0716 206	.0681 459	.0648 500	.0617 253
.97	.1293 941	.1244 282	.1196 731	.1151 184	.1107 541	.1065 712
.98	.2168 109	.2108 239	.2050 319	.1994 266	.1940 004	.1887 461
.99	.3836 977	.3774 712	.3713 860	.3654 370	.3596 193	.3539 283
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

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$p = 44$ to 50

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$B(p, q)$	$\cdot 2679\ 6765^-$	$\cdot 2649\ 5677$	$\cdot 2620\ 4516$	$\cdot 2592\ 2747$	$\cdot 2564\ 9876$	$\cdot 2538\ 5444$	$\cdot 2512\ 9026$
$\cdot 72$	$\cdot 0000\ 001$	$\cdot 0000\ 001$					
$\cdot 73$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 74$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 75$	$\cdot 0000\ 005^+$	$\cdot 0000\ 004$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 76$	$\cdot 0000\ 010$	$\cdot 0000\ 007$	$\cdot 0000\ 005^+$	$\cdot 0000\ 004$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 002$
$\cdot 77$	$\cdot 0000\ 017$	$\cdot 0000\ 013$	$\cdot 0000\ 010$	$\cdot 0000\ 008$	$\cdot 0000\ 006$	$\cdot 0000\ 004$	$\cdot 0000\ 003$
$\cdot 78$	$\cdot 0000\ 031$	$\cdot 0000\ 024$	$\cdot 0000\ 019$	$\cdot 0000\ 014$	$\cdot 0000\ 011$	$\cdot 0000\ 009$	$\cdot 0000\ 007$
$\cdot 79$	$\cdot 0000\ 056$	$\cdot 0000\ 044$	$\cdot 0000\ 034$	$\cdot 0000\ 027$	$\cdot 0000\ 021$	$\cdot 0000\ 016$	$\cdot 0000\ 013$
$\cdot 80$	$\cdot 0000\ 099$	$\cdot 0000\ 079$	$\cdot 0000\ 062$	$\cdot 0000\ 049$	$\cdot 0000\ 039$	$\cdot 0000\ 031$	$\cdot 0000\ 025^-$
$\cdot 81$	$\cdot 0000\ 175^+$	$\cdot 0000\ 141$	$\cdot 0000\ 113$	$\cdot 0000\ 090$	$\cdot 0000\ 072$	$\cdot 0000\ 058$	$\cdot 0000\ 047$
$\cdot 82$	$\cdot 0000\ 308$	$\cdot 0000\ 250^+$	$\cdot 0000\ 203$	$\cdot 0000\ 165^-$	$\cdot 0000\ 134$	$\cdot 0000\ 109$	$\cdot 0000\ 088$
$\cdot 83$	$\cdot 0000\ 539$	$\cdot 0000\ 443$	$\cdot 0000\ 364$	$\cdot 0000\ 290$	$\cdot 0000\ 246$	$\cdot 0000\ 202$	$\cdot 0000\ 166$
$\cdot 84$	$\cdot 0000\ 938$	$\cdot 0000\ 780$	$\cdot 0000\ 640$	$\cdot 0000\ 510$	$\cdot 0000\ 419$	$\cdot 0000\ 374$	$\cdot 0000\ 311$
$\cdot 85$	$\cdot 0001\ 625^-$	$\cdot 0001\ 367$	$\cdot 0001\ 151$	$\cdot 0000\ 969$	$\cdot 0000\ 816$	$\cdot 0000\ 687$	$\cdot 0000\ 578$
$\cdot 86$	$\cdot 0002\ 802$	$\cdot 0002\ 386$	$\cdot 0002\ 032$	$\cdot 0001\ 731$	$\cdot 0001\ 474$	$\cdot 0001\ 256$	$\cdot 0001\ 071$
$\cdot 87$	$\cdot 0004\ 814$	$\cdot 0004\ 147$	$\cdot 0003\ 573$	$\cdot 0003\ 079$	$\cdot 0002\ 653$	$\cdot 0002\ 287$	$\cdot 0001\ 972$
$\cdot 88$	$\cdot 0008\ 240$	$\cdot 0007\ 180$	$\cdot 0006\ 258$	$\cdot 0005\ 455^+$	$\cdot 0004\ 750$	$\cdot 0004\ 147$	$\cdot 0003\ 617$
$\cdot 89$	$\cdot 0014\ 064$	$\cdot 0012\ 395^+$	$\cdot 0010\ 927$	$\cdot 0009\ 634$	$\cdot 0008\ 496$	$\cdot 0007\ 493$	$\cdot 0006\ 610$
$\cdot 90$	$\cdot 0023\ 943$	$\cdot 0021\ 342$	$\cdot 0019\ 027$	$\cdot 0016\ 966$	$\cdot 0015\ 132$	$\cdot 0013\ 497$	$\cdot 0012\ 042$
$\cdot 91$	$\cdot 0040\ 692$	$\cdot 0036\ 679$	$\cdot 0033\ 069$	$\cdot 0029\ 818$	$\cdot 0026\ 892$	$\cdot 0024\ 257$	$\cdot 0021\ 884$
$\cdot 92$	$\cdot 0069\ 097$	$\cdot 0062\ 978$	$\cdot 0057\ 411$	$\cdot 0052\ 345^+$	$\cdot 0047\ 734$	$\cdot 0043\ 536$	$\cdot 0039\ 714$
$\cdot 93$	$\cdot 0117\ 364$	$\cdot 0108\ 154$	$\cdot 0099\ 684$	$\cdot 0091\ 802$	$\cdot 0084\ 723$	$\cdot 0078\ 125^+$	$\cdot 0072\ 052$
$\cdot 94$	$\cdot 0199\ 719$	$\cdot 0186\ 068$	$\cdot 0173\ 379$	$\cdot 0161\ 581$	$\cdot 0150\ 608$	$\cdot 0140\ 491$	$\cdot 0130\ 905^-$
$\cdot 95$	$\cdot 0341\ 267$	$\cdot 0321\ 416$	$\cdot 0302\ 766$	$\cdot 0285\ 242$	$\cdot 0268\ 771$	$\cdot 0253\ 287$	$\cdot 0238\ 727$
$\cdot 96$	$\cdot 0587\ 597$	$\cdot 0559\ 450^-$	$\cdot 0532\ 720$	$\cdot 0507\ 356$	$\cdot 0483\ 257$	$\cdot 0460\ 363$	$\cdot 0438\ 609$
$\cdot 97$	$\cdot 1025\ 609$	$\cdot 0987\ 151$	$\cdot 0950\ 262$	$\cdot 0914\ 868$	$\cdot 0880\ 901$	$\cdot 0848\ 297$	$\cdot 0816\ 993$
$\cdot 98$	$\cdot 1836\ 567$	$\cdot 1787\ 258$	$\cdot 1734\ 947$	$\cdot 1693\ 151$	$\cdot 1648\ 239$	$\cdot 1604\ 684$	$\cdot 1562\ 435^+$
$\cdot 99$	$\cdot 3483\ 598$	$\cdot 3429\ 096$	$\cdot 3375\ 738$	$\cdot 3323\ 488$	$\cdot 3272\ 311$	$\cdot 3222\ 174$	$\cdot 3173\ 044$
$I \cdot 00$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION $x = .01$ to $.60$ $q = 1$ $p = 1$ to 3.5

	$p = 1$	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$
$B(p, q) = 1.0000\ 0000$		.6666 6667	.5000 0000	.4000 0000	.3333 3333	.2857 1429
x						
.01	.0100 000 ^e	.0010 000 ^e	.0001 000 ^e	.0000 100 ^e	.0000 010 ^e	.0000 001
.02	.0200 000 ^e	.0028 284	.0004 000 ^e	.0000 566	.0000 080 ^e	.0000 011
.03	.0300 000 ^e	.0051 962	.0009 000 ^e	.0001 559	.0000 270 ^e	.0000 047
.04	.0400 000 ^e	.0080 000 ^e	.0016 000 ^e	.0003 200 ^e	.0000 640 ^e	.0000 128 ^e
.05	.0500 000 ^e	.0111 803	.0025 000 ^e	.0005 590	.0001 250 ^e	.0000 280
.06	.0600 000 ^e	.0146 969	.0036 000 ^e	.0008 818	.0002 160 ^e	.0000 520
.07	.0700 000 ^e	.0185 203	.0049 000 ^e	.0012 964	.0003 430 ^e	.0000 907
.08	.0800 000 ^e	.0226 274	.0064 000 ^e	.0018 102	.0005 120 ^e	.0001 448
.09	.0900 000 ^e	.0270 000 ^e	.0081 000 ^e	.0024 300 ^e	.0007 290 ^e	.0002 187 ^e
.10	.1000 000 ^e	.0316 228	.0100 000 ^e	.0031 623	.0010 000 ^e	.0003 162
.11	.1100 000 ^e	.0364 829	.0121 000 ^e	.0040 131	.0013 310 ^e	.0004 414
.12	.1200 000 ^e	.0415 692	.0144 000 ^e	.0049 883	.0017 280 ^e	.0005 986
.13	.1300 000 ^e	.0468 722	.0169 000 ^e	.0060 934	.0021 970 ^e	.0007 921
.14	.1400 000 ^e	.0523 832	.0196 000 ^e	.0073 336	.0027 440 ^e	.0010 267
.15	.1500 000 ^e	.0580 948	.0225 000 ^e	.0087 142	.0033 750 ^e	.0013 071
.16	.1600 000 ^e	.0640 000 ^e	.0256 000 ^e	.0102 400 ^e	.0040 960 ^e	.0016 381 ^e
.17	.1700 000 ^e	.0700 928	.0289 000 ^e	.0119 158	.0049 130 ^e	.0020 257
.18	.1800 000 ^e	.0763 675 ⁺	.0324 000 ^e	.0137 462	.0058 320 ^e	.0024 743
.19	.1900 000 ^e	.0828 191	.0361 000 ^e	.0157 356	.0068 590 ^e	.0029 808
.20	.2000 000 ^e	.0894 427	.0400 000 ^e	.0178 885 ⁺	.0080 000 ^e	.0035 777
.21	.2100 000 ^e	.0962 341	.0441 000 ^e	.0202 092	.0092 610 ^e	.0042 430
.22	.2200 000 ^e	.1031 891	.0484 000 ^e	.0227 016	.0106 480 ^e	.0049 944
.23	.2300 000 ^e	.1103 041	.0529 000 ^e	.0253 699	.0121 670 ^e	.0058 351
.24	.2400 000 ^e	.1175 755 ⁺	.0576 000 ^e	.0282 181	.0138 240 ^e	.0067 723
.25	.2500 000 ^e	.1250 000 ^e	.0625 000 ^e	.0312 500 ^e	.0156 250 ^e	.0078 125 ^e
.26	.2600 000 ^e	.1325 745 ⁺	.0676 000 ^e	.0344 694	.0175 760 ^e	.0089 620
.27	.2700 000 ^e	.1402 961	.0729 000 ^e	.0378 800	.0196 830 ^e	.0102 276
.28	.2800 000 ^e	.1481 621	.0784 000 ^e	.0414 854	.0219 520 ^e	.0116 159
.29	.2900 000 ^e	.1561 698	.0841 000 ^e	.0452 892	.0243 890 ^e	.0131 339
.30	.3000 000 ^e	.1643 168	.0900 000 ^e	.0492 950 ⁺	.0270 000 ^e	.0147 885 ⁺
.31	.3100 000 ^e	.1726 007	.0961 000 ^e	.0535 062	.0297 910 ^e	.0165 869
.32	.3200 000 ^e	.1810 193	.1024 000 ^e	.0579 262	.0327 680 ^e	.0185 361
.33	.3300 000 ^e	.1895 706	.1089 000 ^e	.0625 583	.0359 370 ^e	.0206 442
.34	.3400 000 ^e	.1982 524	.1156 000 ^e	.0674 058	.0393 040 ^e	.0229 180
.35	.3500 000 ^e	.2070 628	.1225 000 ^e	.0724 720	.0428 750 ^e	.0253 652
.36	.3600 000 ^e	.2160 000 ^e	.1296 000 ^e	.0777 600 ^e	.0466 560 ^e	.0279 036 ^e
.37	.3700 000 ^e	.2250 622	.1369 000 ^e	.0832 730	.0506 530 ^e	.0308 110
.38	.3800 000 ^e	.2342 477	.1444 000 ^e	.0890 141	.0548 720 ^e	.0338 254
.39	.3900 000 ^e	.2435 549	.1521 000 ^e	.0949 864	.0593 190 ^e	.0370 447
.40	.4000 000 ^e	.2529 822	.1600 000 ^e	.1011 929	.0640 000 ^e	.0404 772
.41	.4100 000 ^e	.2625 281	.1681 000 ^e	.1076 365 ⁺	.0689 210 ^e	.0441 310
.42	.4200 000 ^e	.2721 911	.1764 000 ^e	.1143 203	.0740 880 ^e	.0480 145 ⁺
.43	.4300 000 ^e	.2819 699	.1849 000 ^e	.1212 470	.0795 070 ^e	.0521 362
.44	.4400 000 ^e	.2918 630	.1936 000 ^e	.1284 197	.0851 840 ^e	.0565 047
.45	.4500 000 ^e	.3018 692	.2025 000 ^e	.1358 411	.0911 250 ^e	.0611 285 ⁺
.46	.4600 000 ^e	.3119 872	.2116 000 ^e	.1435 141	.0973 360 ^e	.0660 165 ⁺
.47	.4700 000 ^e	.3222 158	.2209 000 ^e	.1514 414	.1038 230 ^e	.0711 775 ⁺
.48	.4800 000 ^e	.3325 538	.2304 000 ^e	.1596 258	.1105 920 ^e	.0766 204
.49	.4900 000 ^e	.3430 000 ^e	.2401 000 ^e	.1680 700	.1176 490 ^e	.0823 543 ^e
.50	.5000 000 ^e	.3535 534	.2500 000 ^e	.1767 767	.1250 000 ^e	.0883 883
.51	.5100 000 ^e	.3642 128	.2601 000 ^e	.1857 486	.1326 510 ^e	.0947 318
.52	.5200 000 ^e	.3749 773	.2704 000 ^e	.1949 882	.1406 080 ^e	.1013 939
.53	.5300 000 ^e	.3858 458	.2809 000 ^e	.2044 983	.1488 770 ^e	.1083 841
.54	.5400 000 ^e	.3968 173	.2916 000 ^e	.2142 814	.1574 640 ^e	.1157 119
.55	.5500 000 ^e	.4078 909	.3025 000 ^e	.2243 400	.1663 750 ^e	.1233 870
.56	.5600 000 ^e	.4190 656	.3136 000 ^e	.2346 768	.1756 160 ^e	.1314 190
.57	.5700 000 ^e	.4303 406	.3249 000 ^e	.2452 941	.1851 930 ^e	.1398 176
.58	.5800 000 ^e	.4417 148	.3364 000 ^e	.2561 946	.1951 120 ^e	.1485 929
.59	.5900 000 ^e	.4531 876	.3481 000 ^e	.2673 807	.2053 790 ^e	.1577 546
.60	.6000 000 ^e	.4647 580	.3600 000 ^e	.2788 548	.2160 000 ^e	.1673 129

TABLE I. THE $I_w(p, q)$ FUNCTION

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 $q = .61$ to 1.00 $q = 1$ $p = 1$ to 3.5

	$p = 1$	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$
$B(p, q) = 1.0000\ 0000$.6666 6667	.5000 0000	.4000 0000	.3333 3333	.2857 1429
.61	.6100 000 ^a	.4764 252	.3721 000 ^a	.2906 194	.2269 810 ^a	.1772 778
.62	.6200 000 ^a	.4881 885 ⁻	.3844 000 ^a	.3026 769	.2383 280 ^a	.1876 597
.63	.6300 000 ^a	.5000 470	.3969 000 ^a	.3150 296	.2500 470 ^a	.1984 687
.64	.6400 000 ^a	.5120 000 ^a	.4096 000 ^a	.3276 800 ^a	.2621 440 ^a	.2097 152 ^a
.65	.6500 000 ^a	.5240 468	.4225 000 ^a	.3406 304	.2746 250 ^a	.2214 098
.66	.6600 000 ^a	.5361 865 ⁺	.4356 000 ^a	.3538 831	.2874 960 ^a	.2335 629
.67	.6700 000 ^a	.5484 186	.4489 000 ^a	.3674 405 ⁻	.3007 630 ^a	.2461 852
.68	.6800 000 ^a	.5607 424	.4624 000 ^a	.3813 048	.3144 320 ^a	.2592 873
.69	.6900 000 ^a	.5731 570	.4761 000 ^a	.3954 784	.3285 090 ^a	.2728 801
.70	.7000 000 ^a	.5856 620	.4900 000 ^a	.4099 634	.3430 000 ^a	.2869 744
.71	.7100 000 ^a	.5982 566	.5041 000 ^a	.4247 622	.3579 110 ^a	.3015 812
.72	.7200 000 ^a	.6109 403	.5184 000 ^a	.4398 770	.3732 480 ^a	.3167 114
.73	.7300 000 ^a	.6237 123	.5329 000 ^a	.4553 100	.3890 170 ^a	.3323 763
.74	.7400 000 ^a	.6365 721	.5476 000 ^a	.4710 633	.4052 240 ^a	.3485 869
.75	.7500 000 ^a	.6495 191	.5625 000 ^a	.4871 393	.4218 750 ^a	.3653 545 ⁻
.76	.7600 000 ^a	.6625 526	.5776 000 ^a	.5035 400	.4389 760 ^a	.3826 904
.77	.7700 000 ^a	.6756 723	.5929 000 ^a	.5202 676	.4565 330 ^a	.4006 061
.78	.7800 000 ^a	.6888 773	.6084 000 ^a	.5373 243	.4745 520 ^a	.4191 130
.79	.7900 000 ^a	.7021 674	.6241 000 ^a	.5547 122	.4930 390 ^a	.4382 226
.80	.8000 000 ^a	.7155 418	.6400 000 ^a	.5724 334	.5120 000 ^a	.4579 467
.81	.8100 000 ^a	.7290 000 ^a	.6561 000 ^a	.5904 900 ^a	.5314 410 ^a	.4782 969 ^a
.82	.8200 000 ^a	.7425 416	.6724 000 ^a	.6088 841	.5513 680 ^a	.4992 850 ⁻
.83	.8300 000 ^a	.7561 660	.6889 000 ^a	.6276 178	.5717 870 ^a	.5209 227
.84	.8400 000 ^a	.7698 727	.7056 000 ^a	.6466 931	.5927 040 ^a	.5432 222
.85	.8500 000 ^a	.7836 613	.7225 000 ^a	.6661 121	.6141 250 ^a	.5661 953
.86	.8600 000 ^a	.7975 312	.7396 000 ^a	.6858 768	.6360 560 ^a	.5898 541
.87	.8700 000 ^a	.8114 820	.7569 000 ^a	.7059 893	.6585 030 ^a	.6142 107
.88	.8800 000 ^a	.8255 132	.7744 000 ^a	.7264 516	.6814 720 ^a	.6392 774
.89	.8900 000 ^a	.8396 243	.7921 000 ^a	.7472 656	.7049 690 ^a	.6650 664
.90	.9000 000 ^a	.8538 150 ⁻	.8100 000 ^a	.7684 335 ⁻	.7290 000 ^a	.6915 901
.91	.9100 000 ^a	.8680 847	.8281 000 ^a	.7899 571	.7535 710 ^a	.7188 609
.92	.9200 000 ^a	.8824 330	.8464 000 ^a	.8118 384	.7786 880 ^a	.7468 913
.93	.9300 000 ^a	.8968 595 ⁺	.8649 000 ^a	.8340 794	.8043 570 ^a	.7756 938
.94	.9400 000 ^a	.9113 638	.8836 000 ^a	.8566 820	.8305 840 ^a	.8052 811
.95	.9500 000 ^a	.9259 455 ⁻	.9025 000 ^a	.8796 482	.8573 750 ^a	.8356 658
.96	.9600 000 ^a	.9406 041	.9216 000 ^a	.9029 799	.8847 360 ^a	.8668 607
.97	.9700 000 ^a	.9553 392	.9409 000 ^a	.9266 790	.9126 730 ^a	.8988 787
.98	.9800 000 ^a	.9701 505 ⁺	.9604 000 ^a	.9507 475 ⁻	.9411 920 ^a	.9317 325 ⁺
.99	.9900 000 ^a	.9850 376	.9801 000 ^a	.9751 872	.9702 990 ^a	.9654 353
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .02$ to $.60$ $q = 1$ $p = 4$ to 6.5

	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$
$B(p, q) = .2500\ 0000$		.2222 2222	.2000 0000	.1818 1818	.1666 6667	.1538 4615 ⁺
x						
.02	.0000 002					
.03	.0000 008	.0000 001				
.04	.0000 026	.0000 005 ⁺	.0000 001			
.05	.0000 062	.0000 014	.0000 003	.0000 001		
.06	.0000 130	.0000 032	.0000 008	.0000 002		
.07	.0000 240	.0000 064	.0000 017	.0000 004	.0000 001	
.08	.0000 410	.0000 116	.0000 033	.0000 009	.0000 003	.0000 001
.09	.0000 656	.0000 197	.0000 059	.0000 018	.0000 005 ⁺	.0000 002
.10	.0001 000 ^e	.0000 316	.0000 100 ^e	.0000 032	.0000 010 ^e	.0000 003
.11	.0001 464	.0000 486	.0000 161	.0000 053	.0000 018	.0000 006
.12	.0002 074	.0000 718	.0000 249	.0000 086	.0000 030	.0000 010
.13	.0002 856	.0001 030	.0000 371	.0000 134	.0000 048	.0000 017
.14	.0003 842	.0001 437	.0000 538	.0000 201	.0000 075 ⁺	.0000 028
.15	.0005 062	.0001 961	.0000 759	.0000 294	.0000 114	.0000 041
.16	.0006 554	.0002 621	.0001 049	.0000 419	.0000 168	.0000 067
.17	.0008 352	.0003 444	.0001 420	.0000 585 ⁺	.0000 241	.0000 100
.18	.0010 498	.0004 454	.0001 890	.0000 802	.0000 340	.0000 141
.19	.0013 032	.0005 681	.0002 476	.0001 079	.0000 470	.0000 205 ⁺
.20	.0016 000 ^e	.0007 155 ⁺	.0003 200 ^e	.0001 431	.0000 640 ^e	.0000 286
.21	.0019 448	.0008 912	.0004 084	.0001 872	.0000 858	.0000 393
.22	.0023 426	.0010 988	.0005 154	.0002 417	.0001 134	.0000 532
.23	.0027 984	.0013 421	.0006 436	.0003 087	.0001 480	.0000 710
.24	.0033 178	.0016 254	.0007 963	.0003 901	.0001 911	.0000 936
.25	.0039 062	.0019 531	.0009 766	.0004 883	.0002 441	.0001 221
.26	.0045 698	.0023 301	.0011 881	.0006 058	.0003 080	.0001 575 ⁺
.27	.0053 144	.0027 614	.0014 349	.0007 456	.0003 874	.0002 013
.28	.0061 466	.0032 525 ⁻	.0017 210	.0009 107	.0004 819	.0002 550
.29	.0070 728	.0038 088	.0020 511	.0011 046	.0005 948	.0003 203
.30	.0081 000 ^e	.0044 366	.0024 300 ^e	.0013 310	.0007 290 ^e	.0003 903
.31	.0092 352	.0051 419	.0028 629	.0015 940	.0008 875 ⁺	.0004 941
.32	.0104 858	.0059 316	.0033 554	.0018 981	.0010 737	.0006 074
.33	.0118 592	.0068 126	.0039 135 ⁺	.0022 482	.0012 915 ⁻	.0007 410
.34	.0133 634	.0077 921	.0045 435 ⁺	.0026 493	.0015 448	.0009 008
.35	.0150 003	.0088 778	.0052 522	.0031 072	.0018 383	.0010 875 ⁺
.36	.0167 962	.0100 777	.0060 466	.0036 280	.0021 768	.0013 061
.37	.0187 416	.0114 001	.0069 344	.0042 180	.0025 657	.0015 607
.38	.0208 514	.0128 536	.0079 235 ⁺	.0048 844	.0030 100	.0018 501
.39	.0231 344	.0144 474	.0090 224	.0056 345 ⁻	.0035 187	.0021 975
.40	.0256 000 ^e	.0161 909	.0102 400 ^e	.0064 763	.0040 960 ^e	.0025 905 ⁺
.41	.0282 576	.0180 937	.0115 856	.0074 184	.0047 501	.0030 416
.42	.0311 170	.0201 661	.0130 691	.0084 698	.0054 890	.0035 573
.43	.0341 880	.0224 186	.0147 008	.0096 400	.0063 214	.0041 452
.44	.0374 810	.0248 621	.0164 916	.0109 393	.0072 563	.0048 133
.45	.0410 062	.0275 078	.0184 528	.0123 785 ⁺	.0083 038	.0055 703
.46	.0447 746	.0303 676	.0205 963	.0139 691	.0094 743	.0064 258
.47	.0487 968	.0334 534	.0229 345 ⁺	.0157 231	.0107 702	.0073 890
.48	.0530 842	.0367 778	.0254 804	.0176 533	.0122 306	.0084 736
.49	.0576 480	.0403 536	.0282 475 ⁺	.0197 733	.0138 413	.0096 880
.50	.0625 000 ^e	.0441 942	.0312 500 ^e	.0220 971	.0156 250 ^e	.0110 485 ⁺
.51	.0676 520	.0483 132	.0345 025 ⁺	.0246 397	.0175 963	.0125 663
.52	.0731 162	.0527 248	.0380 204	.0274 169	.0197 706	.0142 568
.53	.0789 048	.0574 436	.0418 195 ⁺	.0304 451	.0221 644	.0161 350
.54	.0850 306	.0624 844	.0459 165 ⁺	.0337 416	.0247 949	.0182 205 ⁻
.55	.0915 063	.0678 629	.0503 284	.0373 246	.0276 806	.0205 285 ⁺
.56	.0983 450 ⁻	.0735 946	.0550 732	.0412 130	.0308 410	.0230 793
.57	.1055 600	.0796 961	.0601 692	.0454 268	.0342 964	.0258 932
.58	.1131 650 ⁻	.0861 839	.0656 357	.0499 866	.0380 687	.0289 923
.59	.1211 736	.0930 752	.0714 924	.0549 144	.0421 805 ⁺	.0323 995 ⁺
.60	.1296 000 ^e	.1003 877	.0777 600 ^e	.0602 326	.0466 560 ^e	.0361 396

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$p = 4$ to 6.5

	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$
$B(p, q)$	2500 0000	2222 2222	2000 0000	1818 1818	1666 6667	1538 4615 ⁺
1	1384 584	1081 395 ⁻	0844 596	0659 651	0515 204	0402 387
2	1477 634	1163 490	0916 133	0721 304	0568 002	0447 246
3	1575 296	1250 353	0992 437	0787 722	0625 235 ⁺	0496 265 ⁻
4	1677 722	1342 177	1073 742	0856 993	0687 195 ⁻	0549 756
5	1785 062	1439 103	1160 291	0935 456	0754 189	0608 047
6	1897 474	1541 515 ⁻	1252 333	1017 400	0826 540	0671 464
7	2015 112	1649 440	1350 125 ⁺	1105 125 ⁺	0904 584	0740 434
8	2138 138	1763 153	1453 934	1198 944	0988 675 ⁻	0815 282
9	2266 712	1882 872	1564 031	1299 182	1079 182	0896 436
10	2401 000 ⁰	2008 821	1680 700 ⁰	1406 175 ⁻	1176 490 ⁰	0984 322
11	2541 168	2141 226	1804 229	1520 271	1281 003	1079 392
12	2687 386	2280 322	1934 918	1641 832	1393 141	1182 119
13	2839 824	2426 347	2073 072	1771 233	1513 342	1293 000
14	2998 658	2579 543	2219 007	1908 862	1642 065 ⁻	1412 558
15	3164 062	2740 159	2373 047	2055 119	1779 785 ⁺	1541 339
16	3336 218	2908 447	2535 525 ⁺	2210 420	1926 999	1679 919
17	3515 394	3084 667	2706 784	2375 193	2084 224	1828 899
18	3701 506	3269 081	2887 174	2549 883	2251 996	1988 909
19	3895 668	3461 959	3077 056	2734 948	2430 875 ⁻	2166 609
20	4096 000 ⁰	3663 574	3276 800 ⁰	2930 859	2621 440 ⁰	2344 687
21	4304 672	3874 205 ⁻	3486 784	3138 106	2824 295 ⁺	2541 866
22	4521 218	4094 737	3707 398	3357 192	3040 067	2752 897
23	4745 832	4323 959	3939 041	3588 637	3269 404	2978 569
24	4978 714	4563 066	4182 119	3832 976	3512 980	3219 700
25	5220 662	4812 660	4437 053	4090 761	3771 495 ⁺	3477 147
26	5470 682	5072 745 ⁻	4704 270	4362 561	4045 672	3751 802
27	5728 976	5343 633	4984 209	4648 961	4336 262	4044 596
28	5996 954	5625 641	5277 319	4950 564	4644 041	4356 496
29	6274 224	5919 091	5584 059	5267 991	4969 813	4688 512
30	6561 000 ⁰	6224 311	5904 900 ⁰	5601 880	5314 410 ⁰	5041 692
31	6857 496	6541 634	6240 321	5952 887	5678 693	5417 127
32	7163 930	6871 400	6590 815 ⁺	6321 688	6063 550 ⁺	5815 953
33	7480 520	7213 952	6956 884	6708 970	6460 902	6230 347
34	7807 490	7566 642	7339 040	7115 463	6869 668	6688 530
35	8145 662	7938 825 ⁻	7737 809	7541 884	7290 919	7164 789
36	8493 466	8321 803	8153 727	7988 988	7727 578	7669 429
37	8852 928	8719 123	8587 340	8457 549	8229 720	8203 823
38	9223 682	9130 979	9039 208	8948 359	8858 424	8769 392
39	9605 960	9557 810	9509 900	9462 232	9414 801	9367 609
100	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .10$ to $.70$ $q = 1$ $p = 7$ to 9.5

	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$B(p, q) = .1428\ 5714$		.1333 3333	.1250 0000	.1176 4706	.1111 1111	.1052 6316
$\cdot 10$	.0000 001 ^e					
$\cdot 11$	.0000 002	.0000 001				
$\cdot 12$	.0000 004	.0000 001				
$\cdot 13$	.0000 006	.0000 002	.0000 001			
$\cdot 14$	.0000 011	.0000 004	.0000 001	.0000 001		
$\cdot 15$	.0000 017	.0000 007	.0000 003	.0000 001		
$\cdot 16$	.0000 027	.0000 011	.0000 004	.0000 002	.0000 001	
$\cdot 17$	.0000 041	.0000 017	.0000 007	.0000 003	.0000 001	
$\cdot 18$	.0000 061	.0000 026	.0000 011	.0000 005 ⁻	.0000 002	.0000 001
$\cdot 19$	.0000 089	.0000 039	.0000 017	.0000 007	.0000 003	.0000 001
$\cdot 20$	.0000 128 ^e	.0000 057	.0000 026	.0000 011	.0000 005 ⁺	.0000 002
$\cdot 21$	.0000 180	.0000 083	.0000 038	.0000 017	.0000 008	.0000 004
$\cdot 22$	.0000 249	.0000 117	.0000 055 ⁻	.0000 026	.0000 012	.0000 006
$\cdot 23$	.0000 340	.0000 163	.0000 078	.0000 038	.0000 018	.0000 009
$\cdot 24$	.0000 459	.0000 225 ⁻	.0000 110	.0000 054	.0000 026	.0000 013
$\cdot 25$	.0000 610	.0000 305 ⁺	.0000 153	.0000 076	.0000 038	.0000 019
$\cdot 26$	.0000 803	.0000 410	.0000 209	.0000 106	.0000 054	.0000 028
$\cdot 27$	.0001 046	.0000 544	.0000 282	.0000 147	.0000 076	.0000 040
$\cdot 28$	.0001 349	.0000 714	.0000 378	.0000 200	.0000 106	.0000 056
$\cdot 29$	.0001 725 ⁻	.0000 929	.0000 500 ⁺	.0000 269	.0000 145 ⁺	.0000 078
$\cdot 30$	.0002 187 ^e	.0001 198	.0000 656	.0000 359	.0000 197	.0000 108
$\cdot 31$	.0002 751	.0001 532	.0000 853	.0000 475 ⁻	.0000 264	.0000 147
$\cdot 32$	.0003 436	.0001 944	.0001 100	.0000 622	.0000 352	.0000 199
$\cdot 33$	.0004 262	.0002 448	.0001 406	.0000 808	.0000 464	.0000 267
$\cdot 34$	.0005 252	.0003 063	.0001 786	.0001 041	.0000 607	.0000 351
$\cdot 35$	.0006 434	.0003 806	.0002 252	.0001 332	.0000 788	.0000 466
$\cdot 36$	.0007 836	.0004 702	.0002 821	.0001 693	.0001 016	.0000 609
$\cdot 37$	.0009 493	.0005 774	.0003 512	.0002 137	.0001 300	.0000 791
$\cdot 38$	.0011 442	.0007 053	.0004 348	.0002 680	.0001 652	.0001 018
$\cdot 39$	.0013 723	.0008 570	.0005 352	.0003 342	.0002 087	.0001 304
$\cdot 40$	.0016 384 ^e	.0010 362	.0006 554	.0004 145 ⁻	.0002 621	.0001 658
$\cdot 41$	.0019 475 ⁺	.0012 470	.0007 985 ⁻	.0005 113	.0003 274	.0002 096
$\cdot 42$	.0023 054	.0014 941	.0009 683	.0006 275 ⁺	.0004 067	.0002 636
$\cdot 43$	.0027 182	.0017 824	.0011 688	.0007 664	.0005 026	.0003 296
$\cdot 44$	.0031 928	.0021 178	.0014 048	.0009 319	.0006 181	.0004 100
$\cdot 45$	.0037 367	.0025 067	.0016 815 ⁺	.0011 280	.0007 567	.0005 076
$\cdot 46$	.0043 582	.0029 559	.0020 048	.0013 597	.0009 222	.0006 255
$\cdot 47$	.0050 662	.0034 732	.0023 811	.0016 324	.0011 191	.0007 672
$\cdot 48$	.0058 707	.0040 673	.0028 179	.0019 523	.0013 526	.0009 371
$\cdot 49$	.0067 822	.0047 476	.0033 233	.0023 263	.0016 284	.0011 399
$\cdot 50$	.0078 125 ^e	.0055 243	.0039 062	.0027 621	.0019 531	.0013 811
$\cdot 51$	.0089 741	.0064 088	.0045 768	.0032 685 ⁻	.0023 342	.0016 606
$\cdot 52$	.0102 807	.0074 135 ⁺	.0053 460	.0038 550 ⁺	.0027 799	.0020 646
$\cdot 53$	.0117 471	.0085 520	.0062 260	.0045 326	.0032 998	.0024 023
$\cdot 54$	.0133 893	.0098 391	.0072 302	.0053 131	.0039 043	.0028 601
$\cdot 55$	.0152 244	.0112 907	.0083 734	.0062 099	.0046 054	.0034 151
$\cdot 56$	.0172 709	.0129 244	.0096 717	.0072 377	.0054 162	.0040 531
$\cdot 57$	.0195 490	.0147 592	.0111 429	.0084 127	.0063 515 ⁻	.0047 052
$\cdot 58$	.0220 798	.0168 155 ⁺	.0128 063	.0097 530	.0074 277	.0056 567
$\cdot 59$	.0248 865 ⁺	.0191 157	.0146 830	.0112 783	.0086 630	.0066 542
$\cdot 60$	.0279 936 ^e	.0216 837	.0167 962	.0130 102	.0100 777	.0078 061
$\cdot 61$	.0314 274	.0245 456	.0191 707	.0149 728	.0116 941	.0091 334
$\cdot 62$	.0352 161	.0277 292	.0218 340	.0171 921	.0135 371	.0106 591
$\cdot 63$	.0393 898	.0312 647	.0248 156	.0196 968	.0156 338	.0124 090
$\cdot 64$	.0439 805 ⁻	.0351 844	.0281 475 ⁻	.0225 180	.0180 144	.0144 115 ⁺
$\cdot 65$	.0490 223	.0395 230	.0318 645 ⁻	.0256 900	.0207 119	.0166 985 ⁻
$\cdot 66$	.0545 516	.0443 179	.0360 041	.0292 498	.0237 627	.0193 049
$\cdot 67$	.0606 071	.0496 091	.0406 068	.0332 381	.0272 065 ⁺	.0222 695 ⁺
$\cdot 68$	.0672 299	.0554 392	.0457 163	.0376 986	.0310 871	.0256 351
$\cdot 69$	.0744 635 ⁺	.0618 541	.0513 798	.0426 793	.0354 521	.0294 487
$\cdot 70$.0823 543 ^e	.0689 026	.0576 480	.0482 318	.0403 536	.0337 622

TABLE I. THE $I_w(p, q)$ FUNCTION

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 $w = .71$ to 1.00 $q = 1$ $p = 7$ to 9.5

	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$I(p, q)$.1428 5714	.1333 3333	.1250 0000	.1176 4706	.1111 1111	.1052 6316
x						
.71	.0000 512	.0766 368	.0645 754	.0544 122	.0458 485 ⁺	.0386 326
.72	.1003 061	.0851 126	.0722 204	.0612 811	.0510 987	.0441 224
.73	.1104 740	.0943 800	.0806 460	.0680 040	.0588 716	.0502 999
.74	.1215 128	.1045 203	.0899 195 ⁺	.0773 517	.0665 404	.0572 402
.75	.1334 830	.1156 004	.1001 120	.0867 003	.0750 847	.0650 252
.76	.1464 510	.1276 738	.1113 035 ⁺	.0970 321	.0845 906	.0737 444
.77	.1604 852	.1408 252	.1235 736	.1084 354	.0951 517	.0834 953
.78	.1756 557	.1551 349	.1370 114	.1210 052	.1068 680	.0943 841
.79	.1920 301	.1706 881	.1517 109	.1348 436	.1198 516	.1065 264
.80	.2097 152 ⁺	.1875 750 ⁺	.1677 722	.1500 600	.1342 177	.1200 480
.81	.2287 670	.2058 911	.1853 020	.1667 718	.1500 946	.1350 852
.82	.2492 855 ⁺	.2257 376	.2044 141	.1851 048	.1676 196	.1517 860
.83	.2713 605 ⁺	.2472 212	.2252 202	.2051 936	.1860 403	.1703 107
.84	.2950 903	.2704 548	.2478 759	.2271 820	.2082 157	.1908 329
.85	.3205 771	.2955 575 ⁺	.2724 905 ⁺	.2512 239	.2316 169	.2135 403
.86	.3479 278	.3226 550 ⁺	.2992 179	.2774 833	.2573 274	.2380 356
.87	.3772 548	.3518 798	.3282 117	.3061 355 ⁺	.2855 442	.2663 379
.88	.4086 756	.3833 717	.3596 345 ⁺	.3373 671	.3164 784	.2968 830
.89	.4423 133	.4172 776	.3936 580	.3713 770	.3503 564	.3305 256
.90	.4782 969 ⁺	.4537 523	.4304 672	.4083 771	.3874 205 ⁺	.3675 393
.91	.5167 610	.4920 586	.4702 525 ⁺	.4485 923	.4279 298	.4082 100
.92	.5578 466	.5350 677	.5132 180	.4922 623	.4721 614	.4528 813
.93	.6017 000	.5802 503	.5595 818	.5396 412	.5204 111	.5018 663
.94	.6484 770	.6287 224	.6095 680	.5909 990	.5729 948	.5555 391
.95	.6983 373	.6806 550 ⁺	.6634 204	.6466 223	.6302 494	.6142 911
.96	.7514 475 ⁺	.7362 652	.7213 896	.7068 145 ⁺	.6925 340	.6785 420
.97	.8070 828	.7957 708	.7837 434	.7718 977	.7602 311	.7487 408
.98	.8661 255 ⁺	.8594 004	.8507 630	.8422 124	.8337 478	.8253 682
.99	.9320 653	.9273 933	.9227 447	.9181 104	.9135 172	.9089 382
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .19$ to $.80$ $q = 1$ $p = 10$ to 14

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$B(p, q) = .1000\ 0000$		$.9523\ 8095 \times \frac{1}{10}$	$.9090\ 9091 \times \frac{1}{10}$	$.8363\ 6364 \times \frac{1}{10}$	$.7692\ 3077 \times \frac{1}{10}$	$.7142\ 8571 \times \frac{1}{10}$
x						
.19	.0000 001					
.20	.0000 001					
.21	.0000 002	.0000 001				
.22	.0000 003	.0000 001	.0000 001			
.23	.0000 004	.0000 002	.0000 001			
.24	.0000 006	.0000 003	.0000 002			
.25	.0000 010	.0000 005	.0000 002	.0000 001		
.26	.0000 014	.0000 007	.0000 004	.0000 001		
.27	.0000 021	.0000 011	.0000 006	.0000 002		
.28	.0000 030	.0000 016	.0000 008	.0000 002	.0000 001	
.29	.0000 042	.0000 023	.0000 012	.0000 004	.0000 001	
.30	.0000 059	.0000 032	.0000 018	.0000 005 ⁺	.0000 002	
.31	.0000 082	.0000 046	.0000 025 ⁺	.0000 008	.0000 002	.0000 001
.32	.0000 113	.0000 064	.0000 036	.0000 012	.0000 004	.0000 001
.33	.0000 153	.0000 088	.0000 051	.0000 017	.0000 006	.0000 002
.34	.0000 206	.0000 120	.0000 070	.0000 024	.0000 008	.0000 003
.35	.0000 276	.0000 163	.0000 097	.0000 034	.0000 012	.0000 004
.36	.0000 366	.0000 219	.0000 132	.0000 047	.0000 017	.0000 006
.37	.0000 481	.0000 292	.0000 178	.0000 066	.0000 024	.0000 009
.38	.0000 628	.0000 387	.0000 239	.0000 091	.0000 034	.0000 013
.39	.0000 814	.0000 508	.0000 317	.0000 124	.0000 048	.0000 019
.40	.0001 049	.0000 663	.0000 419	.0000 168	.0000 067	.0000 027
.41	.0001 342	.0000 859	.0000 550 ⁺	.0000 226	.0000 093	.0000 038
.42	.0001 708	.0001 107	.0000 717	.0000 301	.0000 127	.0000 053
.43	.0002 161	.0001 417	.0000 929	.0000 400	.0000 172	.0000 074
.44	.0002 720	.0001 804	.0001 197	.0000 527	.0000 232	.0000 102
.45	.0003 405 ⁺	.0002 284	.0001 532	.0000 690	.0000 310	.0000 140
.46	.0004 242	.0002 877	.0001 951	.0000 898	.0000 413	.0000 190
.47	.0005 260	.0003 606	.0002 472	.0001 162	.0000 546	.0000 257
.48	.0006 493	.0004 498	.0003 116	.0001 496	.0000 718	.0000 345
.49	.0007 979	.0005 585 ⁺	.0003 910	.0001 916	.0000 939	.0000 460
.50	.0009 766	.0006 905 ⁺	.0004 883	.0002 441	.0001 221	.0000 610
.51	.0011 904	.0008 501	.0006 071	.0003 096	.0001 579	.0000 805 ⁺
.52	.0014 456	.0010 424	.0007 517	.0003 909	.0002 033	.0001 057
.53	.0017 489	.0012 732	.0009 269	.0004 913	.0002 604	.0001 380
.54	.0021 083	.0015 493	.0011 385 ⁻	.0006 148	.0003 320	.0001 703
.55	.0025 330	.0018 785 ⁻	.0013 931	.0007 662	.0004 214	.0002 318
.56	.0030 331	.0022 697	.0016 985 ⁺	.0009 512	.0005 327	.0002 983
.57	.0036 203	.0027 333	.0020 636	.0011 762	.0006 705 ⁻	.0003 822
.58	.0043 080	.0032 809	.0024 987	.0014 492	.0008 406	.0004 875 ⁺
.59	.0051 112	.0039 260	.0030 156	.0017 792	.0010 497	.0006 193
.60	.0060 466	.0046 837	.0036 280	.0021 768	.0013 061	.0007 836
.61	.0071 334	.0055 714	.0043 514	.0026 543	.0016 192	.0009 877
.62	.0083 930	.0066 086	.0052 037	.0032 263	.0020 003	.0012 402
.63	.0098 493	.0078 176	.0062 051	.0039 092	.0024 628	.0015 510
.64	.0115 292	.0092 234	.0073 787	.0047 224	.0030 223	.0019 343
.65	.0134 627	.0108 540	.0087 508	.0056 880	.0036 972	.0024 032
.66	.0156 834	.0127 412	.0103 510	.0068 317	.0045 089	.0029 759
.67	.0182 284	.0149 206	.0122 130	.0081 827	.0054 824	.0036 732
.68	.0211 392	.0174 319	.0143 747	.0097 748	.0066 468	.0045 199
.69	.0244 619	.0203 196	.0168 787	.0116 403	.0080 360	.0055 448
.70	.0282 475 ⁺	.0236 336	.0197 733	.0138 413	.0096 889	.0067 822
.71	.0325 524	.0274 292	.0231 122	.0164 097	.0116 509	.0082 721
.72	.0374 391	.0317 681	.0269 561	.0194 084	.0139 741	.0100 613
.73	.0429 763	.0367 189	.0313 727	.0229 020	.0167 185 ⁻	.0122 045 ⁺
.74	.0492 399	.0423 578	.0364 375 ⁺	.0269 638	.0199 532	.0147 654
.75	.0563 135 ⁺	.0487 680	.0422 351	.0316 764	.0237 573	.0178 179
.76	.0642 889	.0560 458	.0488 596	.0371 333	.0282 213	.0214 482
.77	.0732 668	.0642 914	.0564 154	.0434 399	.0334 487	.0257 555 ⁺
.78	.0833 578	.0736 196	.0650 191	.0507 149	.0395 576	.0308 549
.79	.0946 828	.0841 559	.0747 994	.0590 915 ⁺	.0466 823	.0368 790
.80	.1073 742	.0960 384	.0858 993	.0687 195 ⁻	.0549 756	.0439 805 ⁻

TABLE I. THE $I_x(p, q)$ FUNCTION

23

 $x = .81$ to 1.00 $q = 1$ $p = 10$ to 14

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$B(p, q)$	1.0000 0000	.9523 8005 $\times \frac{1}{10}$	.9090 9091 $\times \frac{1}{10}$	.8363 6364 $\times \frac{1}{10}$	.7692 3077 $\times \frac{1}{10}$	.7142 8571 $\times \frac{1}{10}$
x						
.81	.1215 767	.1094 190	.0984 771	.0797 664	.0646 108	.0523 348
.82	.1374 480	.1244 645 ⁺	.1127 074	.0924 201	.0757 844	.0621 432
.83	.1551 604	.1413 579	.1287 831	.1068 900	.0887 187	.0736 365 ⁺
.84	.1749 012	.1602 906	.1460 170	.1234 103	.1036 647	.0870 783
.85	.1968 744	.1815 002	.1673 432	.1422 418	.1209 055 ⁺	.1027 697
.86	.2213 016	.2052 266	.1903 194	.1636 746	.1407 602	.1210 538
.87	.2484 234	.2317 139	.2161 284	.1880 317	.1635 876	.1423 212
.88	.2785 010	.2612 571	.2450 809	.2156 712	.1897 906	.1670 157
.89	.3118 172	.2941 678	.2775 173	.2460 904	.2198 215 ⁺	.1956 411
.90	.3486 784	.3307 854	.3138 166	.2824 295 ⁺	.2541 866	.2287 679
.91	.3894 161	.3714 793	.3543 687	.3224 755 ⁺	.2934 527	.2670 420
.92	.4343 885 ⁺	.4166 508	.3996 374	.3676 664	.3382 531	.3111 928
.93	.4830 823	.4667 356	.4501 035 ⁺	.4185 903	.3892 946	.3620 439
.94	.5386 151	.5222 067	.5062 982	.4750 203	.4473 651	.4205 232
.95	.5987 369	.5835 766	.5688 001	.5403 601	.5133 421	.4876 750 ⁺
.96	.6648 326	.6514 003	.6382 393	.6127 098	.5882 014	.5646 733
.97	.7374 241	.7262 785 ⁺	.7153 014	.6938 424	.6730 271	.6528 303
.98	.8170 728	.8088 608	.8007 314	.7847 167	.7690 224	.7536 419
.99	.9043 821	.8998 488	.8953 383	.8863 849	.8775 210	.8687 458
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .33$ to 1.00 $q = 1$ $p = 15$ to 20

	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$B(p, q) = .6666\ 6667 \times \frac{1}{10}$	$.6250\ 0000 \times \frac{1}{10}$	$.5882\ 3529 \times \frac{1}{10}$	$.5555\ 5556 \times \frac{1}{10}$	$.5263\ 1579 \times \frac{1}{10}$	$.5000\ 0000 \times \frac{1}{10}$	
x						
.33	.0000 001					
.34	.0000 001					
.35	.0000 001	.0000 001				
.36	.0000 002	.0000 001				
.37	.0000 003	.0000 001				
.38	.0000 005	.0000 002	.0000 001			
.39	.0000 007	.0000 003	.0000 001			
.40	.0000 011	.0000 004	.0000 002	.0000 001		
.41	.0000 016	.0000 006	.0000 003	.0000 001		
.42	.0000 022	.0000 009	.0000 004	.0000 002	.0000 001	
.43	.0000 032	.0000 014	.0000 006	.0000 003	.0000 001	
.44	.0000 045	.0000 020	.0000 009	.0000 004	.0000 002	.0000 001
.45	.0000 063	.0000 028	.0000 013	.0000 006	.0000 003	.0000 001
.46	.0000 087	.0000 040	.0000 018	.0000 009	.0000 004	.0000 002
.47	.0000 121	.0000 057	.0000 027	.0000 013	.0000 006	.0000 003
.48	.0000 165 ⁺	.0000 079	.0000 038	.0000 018	.0000 009	.0000 004
.49	.0000 225 ⁺	.0000 110	.0000 054	.0000 027	.0000 013	.0000 006
.50	.0000 305 ⁺	.0000 153	.0000 076	.0000 038	.0000 019	.0000 010
.51	.0000 411	.0000 209	.0000 107	.0000 054	.0000 028	.0000 014
.52	.0000 550	.0000 286	.0000 149	.0000 077	.0000 040	.0000 021
.53	.0000 731	.0000 388	.0000 205 ⁺	.0000 109	.0000 058	.0000 031
.54	.0000 968	.0000 523	.0000 282	.0000 152	.0000 082	.0000 044
.55	.0001 275	.0000 701	.0000 386	.0000 212	.0000 117	.0000 064
.56	.0001 670	.0000 935 ⁺	.0000 524	.0000 293	.0000 164	.0000 092
.57	.0002 178	.0001 242	.0000 708	.0000 403	.0000 230	.0000 131
.58	.0002 828	.0001 640	.0000 951	.0000 552	.0000 320	.0000 186
.59	.0003 654	.0002 156	.0001 272	.0000 750 ⁺	.0000 443	.0000 261
.60	.0004 702	.0002 821	.0001 693	.0001 016	.0000 609	.0000 366
.61	.0006 025	.0003 675 ⁺	.0002 242	.0001 368	.0000 834	.0000 509
.62	.0007 689	.0004 767	.0002 956	.0001 833	.0001 136	.0000 704
.63	.0009 775	.0006 158	.0003 880	.0002 444	.0001 540	.0000 970
.64	.0012 379	.0007 923	.0005 071	.0003 245 ⁺	.0002 077	.0001 329
.65	.0015 621	.0010 153	.0006 600	.0004 290	.0002 788	.0001 812
.66	.0019 641	.0012 963	.0008 556	.0005 647	.0003 727	.0002 400
.67	.0024 611	.0016 489	.0011 048	.0007 402	.0004 959	.0003 323
.68	.0030 735 ⁺	.0020 900	.0014 212	.0009 664	.0006 572	.0004 409
.69	.0038 259	.0026 399	.0018 215 ⁺	.0012 569	.0008 672	.0005 984
.70	.0047 476	.0033 233	.0023 263	.0016 284	.0011 399	.0007 979
.71	.0058 732	.0041 700	.0029 607	.0021 021	.0014 925	.0010 597
.72	.0072 442	.0052 158	.0037 554	.0027 039	.0019 468	.0014 017
.73	.0089 093	.0065 038	.0047 478	.0034 659	.0025 301	.0018 470
.74	.0109 264	.0080 855 ⁺	.0059 833	.0044 276	.0032 764	.0024 246
.75	.0133 635	.0100 226	.0075 169	.0056 377	.0042 283	.0031 712
.76	.0163 006	.0123 885	.0094 152	.0071 556	.0054 382	.0041 331
.77	.0198 317	.0152 704	.0117 582	.0090 538	.0069 715	.0053 680
.78	.0240 668	.0187 721	.0146 423	.0114 210	.0089 084	.0069 485 ⁺
.79	.0291 344	.0230 162	.0181 828	.0143 644	.0113 479	.0089 648
.80	.0351 844	.0281 475	.0225 180	.0180 144	.0144 115 ⁺	.0115 292
.81	.0423 912	.0343 368	.0278 128	.0225 284	.0182 480	.0147 809
.82	.0509 575	.0417 851	.0342 638	.0280 963	.0230 390	.0188 920
.83	.0611 183	.0507 282	.0421 044	.0349 467	.0290 057	.0240 748
.84	.0731 458	.0614 425	.0516 117	.0433 538	.0364 172	.0305 904
.85	.0873 542	.0742 511	.0631 134	.0536 464	.0455 994	.0387 595 ⁺
.86	.1041 062	.0895 314	.0769 970	.0662 174	.0569 470	.0489 744
.87	.1238 194	.1077 229	.0937 189	.0815 355	.0709 359	.0617 142
.88	.1469 739	.1293 370	.1138 166	.1001 586	.0881 395 ⁺	.0775 628
.89	.1741 206	.1549 673	.1379 209	.1227 496	.1092 472	.0972 300
.90	.2058 911	.1853 020	.1667 718	.1500 946	.1350 852	.1215 767
.91	.2430 082	.2211 374	.2012 351	.1831 239	.1666 428	.1516 449
.92	.2862 974	.2633 936	.2423 221	.2229 304	.2051 014	.1886 933
.93	.3367 009	.3131 318	.2912 126	.2708 277	.2518 608	.2342 389
.94	.3952 918	.3715 743	.3492 798	.3283 230	.3086 237	.2901 062
.95	.4632 912	.4401 267	.4181 203	.3972 143	.3773 536	.3584 859
.96	.5420 864	.5204 029	.4995 868	.4796 033	.4604 192	.4420 024
.97	.6332 512	.6142 537	.5958 260	.5779 513	.5606 127	.5437 943
.98	.7385 691	.7237 977	.7093 218	.6951 353	.6812 326	.6676 080
.99	.8600 584	.8514 578	.8429 432	.8345 138	.8261 686	.8179 069
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .45$ to 1.00 $q = 1$ $p = 21$ to 26

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$I(p, q) = .47619048 \times \frac{x}{10}$	$.45454545 \times \frac{x}{10}$	$.43478261 \times \frac{x}{10}$	$.41666667 \times \frac{x}{10}$	$.40000000 \times \frac{x}{10}$	$.38461538 \times \frac{x}{10}$	
.45	.0000 001					
.46	.0000 001					
.47	.0000 001	.0000 001				
.48	.0000 002	.0000 001				
.49	.0000 003	.0000 002	.0000 001			
.50	.0000 005 ⁻	.0000 002	.0000 001	.0000 001		
.51	.0000 007	.0000 004	.0000 002	.0000 001		
.52	.0000 011	.0000 006	.0000 003	.0000 002	.0000 001	
.53	.0000 016	.0000 009	.0000 005 ⁻	.0000 002	.0000 001	.0000 001
.54	.0000 024	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
.55	.0000 035 ⁺	.0000 019	.0000 011	.0000 006	.0000 003	.0000 002
.56	.0000 052	.0000 029	.0000 016	.0000 009	.0000 005 ⁺	.0000 003
.57	.0000 075 ⁻	.0000 043	.0000 024	.0000 014	.0000 008	.0000 004
.58	.0000 108	.0000 062	.0000 036	.0000 021	.0000 012	.0000 007
.59	.0000 154	.0000 091	.0000 054	.0000 032	.0000 019	.0000 011
.60	.0000 219	.0000 132	.0000 079	.0000 047	.0000 028	.0000 017
.61	.0000 310	.0000 189	.0000 116	.0000 070	.0000 043	.0000 026
.62	.0000 437	.0000 271	.0000 168	.0000 104	.0000 065 ⁻	.0000 040
.63	.0000 611	.0000 385 ⁺	.0000 243	.0000 153	.0000 096	.0000 061
.64	.0000 851	.0000 544	.0000 348	.0000 223	.0000 143	.0000 091
.65	.0001 178	.0000 766	.0000 498	.0000 324	.0000 210	.0000 137
.66	.0001 623	.0001 071	.0000 707	.0000 467	.0000 308	.0000 203
.67	.0002 226	.0001 492	.0000 999	.0000 670	.0000 449	.0000 301
.68	.0003 039	.0002 066	.0001 405 ⁺	.0000 955 ⁺	.0000 650 ⁻	.0000 442
.69	.0004 129	.0002 849	.0001 966	.0001 356	.0000 936	.0000 646
.70	.0005 585 ⁺	.0003 910	.0002 737	.0001 916	.0001 341	.0000 939
.71	.0007 524	.0005 342	.0003 793	.0002 693	.0001 912	.0001 357
.72	.0010 092	.0007 266	.0005 232	.0003 767	.0002 712	.0001 953
.73	.0013 483	.0009 842	.0007 185 ⁻	.0005 245 ⁺	.0003 829	.0002 795 ⁺
.74	.0017 942	.0013 277	.0009 825 ⁻	.0007 270	.0005 380	.0003 981
.75	.0023 784	.0017 838	.0013 379	.0010 034	.0007 525 ⁺	.0005 644
.76	.0031 411	.0023 873	.0018 143	.0013 789	.0010 479	.0007 964
.77	.0041 334	.0031 827	.0024 507	.0018 870	.0014 530	.0011 188
.78	.0054 198	.0042 275 ⁻	.0032 974	.0025 720	.0020 062	.0015 648
.79	.0070 822	.0055 949	.0044 200	.0034 918	.0027 585 ⁺	.0021 792
.80	.0092 234	.0073 787	.0059 030	.0047 224	.0037 779	.0030 223
.81	.0119 725 ⁺	.0096 977	.0078 552	.0063 627	.0051 538	.0041 746
.82	.0154 914	.0127 030	.0104 164	.0085 415 ⁻	.0070 040	.0057 433
.83	.0199 820	.0165 851	.0137 656	.0114 255 ⁻	.0094 831	.0078 710
.84	.0256 960	.0215 846	.0181 311	.0152 301	.0127 933	.0107 464
.85	.0329 456	.0280 038	.0238 032	.0202 327	.0171 978	.0146 181
.86	.0421 180	.0362 215 ⁻	.0311 505 ⁻	.0267 894	.0230 389	.0198 134
.87	.0536 913	.0467 115 ⁻	.0406 390	.0353 559	.0307 596	.0267 609
.88	.0682 553	.0600 646	.0528 569	.0465 140	.0409 324	.0360 205 ⁻
.89	.0865 347	.0770 150	.0685 441	.0610 043	.0542 938	.0483 215 ⁻
.90	.1094 190	.0984 771	.0886 294	.0797 664	.0717 898	.0646 108
.91	.1379 969	.1255 772	.1142 752	.1039 904	.0946 313	.0861 145 ⁻
.92	.1735 979	.1597 100	.1469 332	.1351 786	.1243 643	.1144 151
.93	.2178 422	.2025 932	.1884 117	.1752 229	.1629 573	.1515 503
.94	.2726 999	.2563 379	.2409 576	.2265 001	.2129 101	.2001 355 ⁺
.95	.3405 616	.3235 335 ⁺	.3073 569	.2919 890	.2773 896	.2635 201
.96	.4243 223	.4073 494	.3910 555 ⁻	.3754 132	.3603 967	.3459 808
.97	.5274 805 ⁺	.5116 561	.4963 064	.4814 172	.4669 747	.4529 655 ⁻
.98	.6542 558	.6411 707	.6283 473	.6157 803	.6034 647	.5913 954
.99	.8097 279	.8016 306	.7936 143	.7856 781	.7778 214	.7700 431
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .54$ to 1.00 $q = 1$ $p = 27$ to 32

	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$B(p, q) = .3703\ 7037 \times \frac{x}{10}$		$.3571\ 4286 \times \frac{x}{10}$	$.3448\ 2759 \times \frac{x}{10}$	$.3333\ 3333 \times \frac{x}{10}$	$.3225\ 8065 \times \frac{x}{10}$	$.3125\ 0000 \times \frac{x}{10}$
x						
.54	.0000 001					
.55	.0000 001	.0000 001				
.56	.0000 002	.0000 001				
.57	.0000 003	.0000 001	.0000 001	.0000 001		
.58	.0000 004	.0000 002	.0000 001	.0000 001	.0000 001	
.59	.0000 007	.0000 004	.0000 002	.0000 002	.0000 001	.0000 001
.60	.0000 010	.0000 006	.0000 004	.0000 002		
.61	.0000 016	.0000 010	.0000 006	.0000 004	.0000 002	.0000 001
.62	.0000 025 ⁻	.0000 015 ⁺	.0000 010	.0000 006	.0000 004	.0000 002
.63	.0000 038	.0000 024	.0000 015 ⁺	.0000 010	.0000 006	.0000 004
.64	.0000 058	.0000 037	.0000 024	.0000 015 ⁺	.0000 010	.0000 006
.65	.0000 089	.0000 058	.0000 038	.0000 024	.0000 016	.0000 010
.66	.0000 134	.0000 089	.0000 058	.0000 039	.0000 025 ⁺	.0000 017
.67	.0000 201	.0000 135 ⁻	.0000 090	.0000 061	.0000 041	.0000 027
.68	.0000 300	.0000 204	.0000 139	.0000 094	.0000 064	.0000 044
.69	.0000 446	.0000 307	.0000 212	.0000 146	.0000 101	.0000 070
.70	.0000 657	.0000 460	.0000 322	.0000 225 ⁺	.0000 158	.0000 110
.71	.0000 964	.0000 684	.0000 486	.0000 345 ⁻	.0000 245	.0000 174
.72	.0001 406	.0001 012	.0000 729	.0000 525 ⁻	.0000 378	.0000 272
.73	.0002 040	.0001 489	.0001 087	.0000 794	.0000 579	.0000 423
.74	.0002 946	.0002 180	.0001 613	.0001 194	.0000 883	.0000 644
.75	.0004 233	.0003 175 ⁻	.0002 381	.0001 786	.0001 339	.0001 005
.76	.0006 053	.0004 600	.0003 496	.0002 657	.0002 019	.0001 535
.77	.0008 615 ⁻	.0006 633	.0005 108	.0003 933	.0003 028	.0002 142
.78	.0012 205 ⁺	.0009 520	.0007 426	.0005 792	.0004 518	.0003 424
.79	.0017 216	.0013 601	.0010 744	.0008 488	.0006 700	.0005 297
.80	.0024 179	.0019 343	.0015 474	.0012 379	.0009 904	.0007 024
.81	.0033 814	.0027 389	.0022 185 ⁺	.0017 970	.0014 550	.0011 700
.82	.0047 095 ⁻	.0038 618	.0031 667	.0025 967	.0021 293	.0017 460
.83	.0065 329	.0054 223	.0045 005 ⁺	.0037 354	.0031 004	.0025 744
.84	.0090 269	.0075 826	.0063 694	.0053 503	.0044 943	.0037 752
.85	.0124 254	.0105 616	.0089 774	.0076 308	.0064 861	.0054 142
.86	.0170 396	.0146 540	.0126 025 ⁻	.0108 381	.0093 208	.0080 159
.87	.0232 820	.0202 553	.0176 221	.0153 313	.0133 382	.0116 042
.88	.0316 980	.0278 943	.0245 469	.0216 013	.0190 092	.0167 281
.89	.0430 061	.0382 754	.0340 651	.0303 180	.0269 830	.0240 149
.90	.0581 497	.0523 348	.0471 013	.0423 912	.0381 520	.0343 368
.91	.0783 642	.0713 114	.0648 934	.0590 530	.0537 382	.0489 018
.92	.1052 619	.0968 410	.0890 937	.0819 662	.0754 080	.0694 762
.93	.1409 417	.1310 758	.1219 005 ⁺	.1133 675 ⁻	.1054 317	.0980 515
.94	.1881 274	.1768 398	.1662 294	.1562 556	.1468 803	.1380 675
.95	.2503 441	.2378 269	.2259 355 ⁺	.2146 388	.2039 068	.1937 115
.96	.3321 416	.3188 559	.3061 017	.2938 576	.2821 033	.2708 162
.97	.4393 765 ⁺	.4261 952	.4134 093	.4010 071	.3889 769	.3773 076
.98	.5795 675 ⁺	.5679 762	.5566 167	.5454 843	.5345 746	.5238 831
.99	.7623 427	.7547 193	.7471 721	.7397 004	.7323 034	.7249 804
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION

27

 $x = .61$ to 1.00 $q = 1$ $p = 33$ to 38

	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$	$p = 38$
$I(p, q) \times 10^5$	3030×10^5	2941×10^5	2857×10^5	2777×10^5	2702×10^5	2631×10^5
.61	.0000 001	.0000 001	.0000 001			
.62	.0000 001	.0000 001	.0000 001			
.63	.0000 002	.0000 002	.0000 001	.0000 001		
.64	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	
.65	.0000 007	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001
.66	.0000 011	.0000 007	.0000 005	.0000 003	.0000 002	.0000 001
.67	.0000 018	.0000 012	.0000 008	.0000 005 ⁺	.0000 004	.0000 002
.68	.0000 030	.0000 020	.0000 014	.0000 009	.0000 006	.0000 004
.69	.0000 048	.0000 033	.0000 023	.0000 016	.0000 011	.0000 008
.70	.0000 077	.0000 054	.0000 038	.0000 027	.0000 019	.0000 013
.71	.0000 123	.0000 088	.0000 062	.0000 044	.0000 031	.0000 022
.72	.0000 196	.0000 141	.0000 102	.0000 073	.0000 053	.0000 038
.73	.0000 309	.0000 225 ⁺	.0000 165	.0000 120	.0000 088	.0000 064
.74	.0000 484	.0000 358	.0000 265	.0000 196	.0000 145 ⁺	.0000 107
.75	.0000 753	.0000 565 ⁺	.0000 424	.0000 318	.0000 238	.0000 179
.76	.0001 166	.0000 886	.0000 674	.0000 512	.0000 389	.0000 296
.77	.0001 796	.0001 383	.0001 065	.0000 820	.0000 631	.0000 486
.78	.0002 749	.0002 144	.0001 672	.0001 304	.0001 017	.0000 794
.79	.0004 185	.0003 306	.0002 612	.0002 063	.0001 630	.0001 288
.80	.0006 338	.0005 071	.0004 056	.0003 245 ⁺	.0002 596	.0002 077
.81	.0009 550 ⁺	.0007 736	.0006 266	.0005 075 ⁺	.0004 111	.0003 330
.82	.0014 317	.0011 740	.0009 627	.0007 894	.0006 473	.0005 308
.83	.0021 359	.0017 728	.0014 714	.0012 213	.0010 137	.0008 413
.84	.0031 711	.0026 638	.0022 376	.0018 796	.0015 788	.0013 262
.85	.0046 862	.0039 833	.0033 858	.0028 779	.0024 462	.0020 793
.86	.0068 936	.0059 285 ⁺	.0050 985 ⁺	.0043 847	.0037 700	.0032 430
.87	.0100 957	.0087 832	.0076 414	.0066 480	.0057 838	.0050 319
.88	.0147 207	.0129 542	.0113 997	.0100 317	.0088 279	.0077 686
.89	.0213 732	.0190 222	.0169 207	.0150 675	.0134 100	.0119 349
.90	.0309 032	.0278 128	.0250 316	.0225 284	.0202 756	.0182 480
.91	.0445 006	.0404 956	.0368 510	.0335 344	.0305 163	.0277 698
.92	.0638 261	.0587 200	.0540 224	.0497 006	.0457 246	.0420 666
.93	.0911 879	.0848 048	.0788 684	.0733 476	.0682 133	.0634 384
.94	.1297 834	.1219 964	.1146 766	.1077 960	.1013 283	.0952 486
.95	.1840 259	.1748 246	.1660 834	.1577 792	.1498 903	.1423 957
.96	.2599 864	.2495 870	.2396 035	.2300 194	.2208 186	.2119 858
.97	.3659 883	.3550 087	.3443 584	.3340 277	.3240 068	.3142 866
.98	.5134 055	.5031 374	.4930 746	.4832 131	.4735 489	.4640 779
.99	.7177 305 ⁺	.7105 532	.7034 477	.6964 132	.6894 491	.6825 546
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .65$ to 1.00 $q = 1$ $p = 39$ to 44

	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$B(p, q) = .2564\ 1026 \times \frac{x}{10}$	$.2500\ 0000 \times \frac{x}{10}$	$.2439\ 0244 \times \frac{x}{10}$	$.2380\ 9524 \times \frac{x}{10}$	$.2325\ 5814 \times \frac{x}{10}$	$.2272\ 7273 \times \frac{x}{10}$	
x						
.65	.0000 001					
.66	.0000 001	.0000 001				
.67	.0000 002	.0000 001	.0000 001			
.68	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001	
.69	.0000 005 ⁺	.0000 004	.0000 002	.0000 002	.0000 001	.0000 001
.70	.0000 009	.0000 006	.0000 004	.0000 003	.0000 002	.0000 002
.71	.0000 016	.0000 011	.0000 008	.0000 006	.0000 004	.0000 003
.72	.0000 027	.0000 020	.0000 014	.0000 010	.0000 007	.0000 005 ⁺
.73	.0000 047	.0000 034	.0000 025 ⁻	.0000 018	.0000 013	.0000 010
.74	.0000 079	.0000 059	.0000 044	.0000 032	.0000 024	.0000 018
.75	.0000 134	.0000 101	.0000 075 ⁺	.0000 057	.0000 042	.0000 032
.76	.0000 225 ⁻	.0000 171	.0000 130	.0000 099	.0000 075 ⁻	.0000 057
.77	.0000 374	.0000 288	.0000 222	.0000 171	.0000 132	.0000 101
.78	.0000 619	.0000 483	.0000 377	.0000 294	.0000 229	.0000 179
.79	.0001 017	.0000 804	.0000 635 ⁻	.0000 502	.0000 396	.0000 313
.80	.0001 662	.0001 329	.0001 063	.0000 851	.0000 681	.0000 544
.81	.0002 697	.0002 185 ⁻	.0001 770	.0001 433	.0001 161	.0000 940
.82	.0004 353	.0003 569	.0002 927	.0002 400	.0001 968	.0001 614
.83	.0006 983	.0005 796	.0004 811	.0003 993	.0003 314	.0002 751
.84	.0011 140	.0009 358	.0007 861	.0006 603	.0005 546	.0004 659
.85	.0017 674	.0015 023	.0012 770	.0010 854	.0009 226	.0007 842
.86	.0027 889	.0023 985 ⁻	.0020 627	.0017 739	.0015 256	.0013 120
.87	.0043 777	.0038 086	.0033 135 ⁺	.0028 828	.0025 080	.0021 820
.88	.0068 363	.0060 160	.0052 941	.0046 588	.0040 907	.0036 078
.89	.0106 221	.0094 537	.0084 138	.0074 882	.0066 645 ⁺	.0059 314
.90	.0164 232	.0147 809	.0133 028	.0119 725 ⁺	.0107 753	.0096 077
.91	.0252 705 ⁺	.0229 962	.0209 265 ⁺	.0190 431	.0173 293	.0157 696
.92	.0387 013	.0356 052	.0327 568	.0301 302	.0277 253	.0255 073
.93	.0589 977	.0548 679	.0510 271	.0474 552	.0441 333	.0410 440
.94	.0895 337	.0841 616	.0791 119	.0743 652	.0699 033	.0657 091
.95	.1352 760	.1285 122	.1220 865 ⁺	.1159 822	.1101 831	.1046 740
.96	.2035 064	.1953 662	.1875 515 ⁺	.1800 494	.1728 475 ⁻	.1659 336
.97	.3048 580	.2957 123	.2868 409	.2782 357	.2698 886	.2617 920
.98	.4547 963	.4457 004	.4367 864	.4280 507	.4194 807	.4110 999
.99	.6757 290	.6689 718	.6622 820	.6556 592	.6491 026	.6426 116
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

29

 $x = .69$ to 1.00 $q = 1$ $p = 45$ to 50

	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$I_3(p, q) = .2222 \ 2222 \times \frac{x}{10}$	$.2173 \ 9130 \times \frac{x}{10}$	$.2127 \ 6596 \times \frac{x}{10}$	$.2083 \ 3333 \times \frac{x}{10}$	$.2040 \ 8163 \times \frac{x}{10}$	$.2000 \ 0000 \times \frac{x}{10}$	
x						
.69	.0000 001					
.70	.0000 001	.0000 001	.0000 001			
.71	.0000 002	.0000 001	.0000 001	.0000 001	.0000 001	
.72	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.73	.0000 007	.0000 005 ⁺	.0000 004	.0000 003	.0000 002	.0000 001
.74	.0000 013	.0000 010	.0000 007	.0000 005 ⁺	.0000 004	.0000 003
.75	.0000 024	.0000 018	.0000 013	.0000 010	.0000 008	.0000 006
.76	.0000 043	.0000 033	.0000 025 ⁺	.0000 019	.0000 014	.0000 011
.77	.0000 078	.0000 060	.0000 046	.0000 036	.0000 027	.0000 021
.78	.0000 139	.0000 109	.0000 085 ⁻	.0000 066	.0000 052	.0000 040
.79	.0000 247	.0000 195 ⁺	.0000 154	.0000 122	.0000 096	.0000 076
.80	.0000 436	.0000 348	.0000 279	.0000 223	.0000 178	.0000 143
.81	.0000 762	.0000 617	.0000 500 ⁻	.0000 405 ⁻	.0000 328	.0000 266
.82	.0001 323	.0001 085 ⁺	.0000 890	.0000 730	.0000 598	.0000 491
.83	.0002 283	.0001 895 ⁻	.0001 573	.0001 305 ⁺	.0001 083	.0000 899
.84	.0003 914	.0003 287	.0002 761	.0002 320	.0001 948	.0001 637
.85	.0006 666	.0005 666	.0004 816	.0004 094	.0003 480	.0002 958
.86	.0011 283	.0009 704	.0008 345 ⁺	.0007 177	.0006 172	.0005 308
.87	.0018 983	.0016 515 ⁺	.0014 368	.0012 500 ⁺	.0010 875 ⁺	.0009 462
.88	.0031 748	.0027 938	.0024 586	.0021 636	.0019 039	.0016 755 ⁻
.89	.0052 790	.0046 983	.0041 815 ⁻	.0037 215 ⁺	.0033 122	.0029 478
.90	.0087 280	.0078 552	.0070 697	.0063 627	.0057 264	.0051 538
.91	.0143 504	.0130 588	.0118 835 ⁺	.0108 140	.0098 408	.0089 551
.92	.0234 667	.0215 894	.0198 622	.0182 732	.0168 114	.0154 665 ⁻
.93	.0381 709	.0354 900	.0330 140	.0307 031	.0285 538	.0265 551
.94	.0617 666	.0580 606	.0545 769	.0513 023	.0482 242	.0453 307
.95	.0994 403	.0944 682	.0897 448	.0852 576	.0809 947	.0769 450 ⁻
.96	.1592 062	.1529 244	.1468 074	.1409 351	.1352 977	.1298 858
.97	.2539 382	.2463 201	.2389 305 ⁻	.2317 625 ⁺	.2248 097	.2180 654
.98	.4028 779	.3948 203	.3869 239	.3791 854	.3716 017	.3641 697
.99	.6361 855 ⁻	.6298 236	.6235 254	.6172 901	.6111 172	.6050 061
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .01$ to $.60$ $q = 1.5$ $p = 1.5$ to 4

	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$
$B(p, q) = .3926\ 9908$		.2666 6667	.1963 4954	.1523 8095 ⁺	.1227 1846	.1015 8730
x						
.01	.0016 926	.0001 869	.0000 203	.0000 022	.0000 002	
.02	.0047 728	.0007 450 ⁻	.0001 144	.0000 174	.0000 026	.0000 004
.03	.0087 414	.0016 705 ⁺	.0003 141	.0000 584	.0000 108	.0000 020
.04	.0134 171	.0029 597	.0006 425 ⁺	.0001 379	.0000 203	.0000 062
.05	.0186 930	.0046 086	.0011 183	.0002 683	.0000 638	.0000 151
.06	.0244 963	.0066 134	.0017 575 ⁻	.0004 617	.0001 203	.0000 311
.07	.0307 722	.0089 702	.0025 741	.0007 303	.0002 054	.0000 574
.08	.0374 780	.0116 750 ⁺	.0035 806	.0010 858	.0003 205 ⁻	.0000 975
.09	.0445 784	.0147 239	.0047 883	.0015 399	.0004 910	.0001 555 ⁺
.10	.0520 440	.0181 128	.0062 074	.0021 038	.0007 070	.0002 300
.11	.0598 494	.0218 377	.0078 471	.0027 887	.0009 828	.0003 441
.12	.0679 724	.0258 945 ⁻	.0097 159	.0036 056	.0013 260	.0004 852
.13	.0763 934	.0302 790	.0118 216	.0045 652	.0017 484	.0006 653
.14	.0850 946	.0349 873	.0141 714	.0056 780	.0022 503	.0008 908
.15	.0940 602	.0400 149	.0167 718	.0069 542	.0028 500	.0011 686
.16	.1032 755 ⁻	.0453 578	.0196 290	.0084 039	.0035 688	.0015 050
.17	.1127 270	.0510 117	.0227 484	.0100 369	.0043 927	.0019 103
.18	.1224 023	.0569 722	.0261 351	.0118 628	.0053 414	.0023 808
.19	.1322 897	.0632 350 ⁺	.0297 938	.0138 908	.0064 247	.0029 570
.20	.1423 785 ⁻	.0697 957	.0337 287	.0161 301	.0076 528	.0036 681
.21	.1526 583	.0766 499	.0379 437	.0185 895 ⁻	.0090 357	.0043 646
.22	.1631 194	.0837 931	.0424 423	.0212 775 ⁺	.0105 836	.0052 318
.23	.1737 527	.0912 208	.0472 276	.0242 026	.0123 066	.0062 103
.24	.1845 494	.0989 284	.0523 023	.0273 727	.0142 151	.0073 371
.25	.1955 011	.1069 113	.0576 689	.0307 958	.0163 192	.0085 953
.26	.2065 999	.1151 648	.0633 295 ⁺	.0344 793	.0186 291	.0100 047
.27	.2178 381	.1236 843	.0692 860	.0384 306	.0211 551	.0115 757
.28	.2292 081	.1324 648	.0755 397	.0426 566	.0239 071	.0133 193
.29	.2407 030	.1415 017	.0820 920	.0471 641	.0268 954	.0152 460
.30	.2523 158	.1507 901	.0889 437	.0519 596	.0301 298	.0173 680
.31	.2640 397	.1603 249	.0960 955 ⁻	.0570 492	.0336 202	.0196 078
.32	.2758 682	.1701 013	.1035 476	.0624 388	.0373 765 ⁺	.0222 448
.33	.2877 950 ⁺	.1801 141	.1113 002	.0681 339	.0414 083	.0250 215
.34	.2998 139	.1903 583	.1193 530	.0741 399	.0457 250	.0280 390
.35	.3119 188	.2008 287	.1277 955 ⁺	.0804 617	.0503 360	.0313 110
.36	.3241 038	.2115 200 ⁺	.1363 570	.0871 040 ⁺	.0552 504	.0348 493
.37	.3363 631	.2224 269	.1453 064	.0940 711	.0604 772	.0386 642
.38	.3486 010	.2335 441	.1545 524	.1013 670	.0660 252	.0427 686
.39	.3610 818	.2448 060	.1640 934	.1089 955 ⁻	.0719 020	.0471 744
.40	.3735 300	.2563 872	.1739 277	.1169 598	.0781 185 ⁺	.0518 937
.41	.3860 303	.2681 020	.1840 529	.1252 630	.0846 801	.0569 383
.42	.3985 771	.2800 048	.1944 669	.1339 076	.0915 953	.0623 200
.43	.4111 652	.2920 898	.2051 669	.1428 961	.0988 717	.0680 506
.44	.4237 894	.3043 511	.2161 499	.1522 302	.1065 163	.0741 415 ⁺
.45	.4364 443	.3167 827	.2274 128	.1619 116	.1145 358	.0806 043
.46	.4491 248	.3293 787	.2389 521	.1719 414	.1229 368	.0874 501
.47	.4618 257	.3421 329	.2507 640	.1823 204	.1317 252	.0946 808
.48	.4745 420	.3550 390	.2628 445 ⁺	.1930 488	.1409 067	.1023 343
.49	.4872 685 ⁻	.3680 907	.2751 892	.2041 266	.1504 866	.1103 938
.50	.5000 000 ⁺	.3812 816	.2877 934	.2155 534	.1604 605 ⁻	.1188 787
.51	.5127 315 ⁺	.3946 050 ⁺	.3006 523	.2273 282	.1708 597	.1277 085 ⁻
.52	.5254 580	.4080 543	.3137 605 ⁺	.2394 496	.1816 613	.1371 627
.53	.5381 743	.4216 227	.3271 125 ⁺	.2519 157	.1928 773	.1469 802
.54	.5508 752	.4353 032	.3407 025 ⁺	.2647 242	.2045 106	.1572 505
.55	.5635 557	.4490 888	.3545 243	.2778 723	.2165 635 ⁻	.1680 685
.56	.5762 106	.4629 721	.3685 712	.2913 567	.2290 374	.1792 346
.57	.5888 348	.4769 459	.3828 364	.3051 734	.2419 335 ⁻	.1909 447
.58	.6014 229	.4910 026	.3973 126	.3193 181	.2552 510	.2031 449
.59	.6139 697	.5051 345 ⁺	.4119 924	.3337 857	.2689 924	.2158 406
.60	.6264 700	.5193 338	.4268 676	.3485 708	.2831 530	.2290 367

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

31

 $p = .61$ to 1.00 $q = 1.5$ $p = 1.5$ to 4

p	$p = 1.5$	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$
$B(p, q)$	.3926 9908	.2666 6667	.1963 4954	.1523 8095 ⁺	.1227 1846	.1015 8730
x						
.61	.6389 182	.5335 923	.4419 209	.3636 671	.2977 344	.2427 370
.62	.6513 090	.5479 019	.4571 705 ⁻	.3790 678	.3127 314	.2569 445 ⁺
.63	.6630 369	.5622 540	.4725 802	.3947 655 ⁺	.3281 413	.2716 615 ⁻
.64	.6758 962	.5766 400 ⁺	.4881 494	.4107 520 ⁺	.3439 598	.2868 890
.65	.6880 812	.5910 510	.5038 679	.4270 184	.3601 815 ⁺	.3026 271
.66	.7001 861	.6054 778	.5197 252	.4435 552	.3768 001	.3188 748
.67	.7122 050 ⁻	.6199 110	.5357 101	.4603 518	.3938 083	.3356 297
.68	.7241 318	.6343 409	.5518 112	.4773 972	.4111 976	.3528 885 ⁻
.69	.7359 603	.6487 576	.5680 161	.4946 791	.4289 583	.3706 459
.70	.7476 842	.6631 506	.5843 121	.5121 846	.4470 796	.3888 957
.71	.7592 970	.6775 094	.6006 859	.5298 997	.4655 493	.4076 296
.72	.7707 919	.6918 229	.6171 234	.5478 094	.4843 539	.4268 380
.73	.7821 619	.7060 796	.6336 098	.5658 975 ⁺	.5034 782	.4465 091
.74	.7934 001	.7202 678	.6501 297	.5841 409	.5229 056	.4666 292
.75	.8044 989	.7343 750 ⁺	.6666 667	.6025 391	.5426 177	.4871 826
.76	.8154 506	.7483 884	.6832 036	.6210 541	.5625 942	.5081 511
.77	.8262 473	.7622 946	.6997 222	.6396 709	.5828 130	.5295 139
.78	.8368 806	.7760 796	.7162 035 ⁺	.6583 665 ⁺	.6032 498	.5512 477
.79	.8473 417	.7897 285 ⁺	.7326 272	.6771 166	.6238 778	.5733 259
.80	.8576 215 ⁺	.8032 260	.7489 717	.6958 948	.6446 680	.5957 189
.81	.8677 103	.8165 557	.7652 143	.7146 727	.6655 882	.6183 933
.82	.8775 977	.8297 004	.7813 305 ⁺	.7334 200	.6866 036	.6413 118
.83	.8872 730	.8420 417	.7972 944	.7521 037	.7076 757	.6644 327
.84	.8967 245 ⁺	.8553 600 ⁺	.8130 780	.7706 880 ⁺	.7287 624	.6877 094
.85	.9059 398	.8678 344	.8286 514	.7891 342	.7498 173	.7110 808
.86	.9149 054	.8800 425 ⁻	.8439 821	.8074 001	.7707 893	.7345 155 ⁺
.87	.9236 066	.8919 597	.8590 348	.8254 393	.7916 219	.7579 211
.88	.9320 276	.9035 594	.8737 710	.8432 000	.8122 521	.7812 328
.89	.9401 506	.9148 125 ⁻	.8881 482	.8606 286	.8326 097	.8043 676
.90	.9479 560	.9256 865 ⁻	.9021 194	.8776 594	.8526 158	.8272 309
.91	.9554 216	.9361 450 ⁺	.9156 315 ⁺	.8942 224	.8721 808	.8497 147
.92	.9625 220	.9461 467	.9286 247	.9102 370	.8912 020	.8716 939
.93	.9692 278	.9556 440	.9410 296	.9256 099	.9095 605 ⁺	.8930 229
.94	.9755 037	.9645 804	.9527 649	.9402 312	.9271 156	.9135 283
.95	.9813 070	.9728 877	.9637 322	.9539 684	.9436 970	.9329 996
.96	.9865 829	.9804 800 ⁺	.9738 084	.9666 560 ⁺	.9590 921	.9511 731
.97	.9912 586	.9872 434	.9828 313	.9780 765 ⁻	.9730 219	.9677 025 ⁻
.98	.9952 272	.9930 138	.9905 689	.9879 205 ⁻	.9850 906	.9820 972
.99	.9983 074	.9975 150 ⁺	.9966 352	.9956 773	.9946 486	.9935 548
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .02$ to $.60$ $q = 1.5$ $p = 4.5$ to 7

	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$
$B(p, q) = .8590\ 2924 \times \frac{x}{10}$	$.7388\ 1674 \times \frac{x}{10}$	$.6442\ 7193 \times \frac{x}{10}$	$.5683\ 2057 \times \frac{x}{10}$	$.5062\ 1366 \times \frac{x}{10}$	$.4540\ 5645 \times \frac{x}{10}$	
x						
.02	.0000 001					
.03	.0000 004	.0000 001				
.04	.0000 013	.0000 003	.0000 001			
.05	.0000 035 ⁺	.0000 008	.0000 002			
.06	.0000 080	.0000 021	.0000 005 ⁺	.0000 001		
.07	.0000 160	.0000 044	.0000 012	.0000 003	.0000 001	.0000 001
.08	.0000 290	.0000 086	.0000 025 ⁺	.0000 007	.0000 002	.0000 001
.09	.0000 490	.0000 154	.0000 048	.0000 015 ⁻	.0000 005 ⁻	.0000 001
.10	.0000 784	.0000 259	.0000 085 ⁺	.0000 028	.0000 009	.0000 003
.11	.0001 198	.0000 415 ⁺	.0000 144	.0000 049	.0000 017	.0000 006
.12	.0001 765 ⁻	.0000 639	.0000 231	.0000 083	.0000 030	.0000 011
.13	.0002 518	.0000 949	.0000 356	.0000 133	.0000 050	.0000 019
.14	.0003 499	.0001 368	.0000 533	.0000 207	.0000 080	.0000 031
.15	.0004 750 ⁺	.0001 923	.0000 775 ⁺	.0000 312	.0000 125 ⁺	.0000 050 ⁺
.16	.0006 321	.0002 642	.0001 101	.0000 457	.0000 180	.0000 078
.17	.0008 265 ⁻	.0003 561	.0001 529	.0000 654	.0000 279	.0000 119
.18	.0010 638	.0004 715 ⁺	.0002 083	.0000 917	.0000 403	.0000 177
.19	.0013 503	.0006 149	.0002 790	.0001 262	.0000 579	.0000 250
.20	.0016 926	.0007 907	.0003 681	.0001 708	.0000 791	.0000 395 ⁺
.21	.0020 977	.0010 040	.0004 789	.0002 277	.0001 080	.0000 511
.22	.0025 734	.0012 605 ⁺	.0006 153	.0002 995 ⁻	.0001 454	.0000 764
.23	.0031 274	.0015 662	.0007 816	.0003 889	.0001 930	.0000 950
.24	.0037 684	.0019 275 ⁺	.0009 825 ⁺	.0004 994	.0002 532	.0001 281
.25	.0045 050 ⁺	.0023 516	.0012 233	.0006 345 ⁺	.0003 283	.0001 695 ⁻
.26	.0053 468	.0028 459	.0015 096	.0007 985 ⁻	.0004 213	.0002 218
.27	.0063 033	.0034 185 ⁺	.0018 477	.0009 958	.0005 354	.0002 872
.28	.0073 847	.0040 780	.0022 444	.0012 317	.0006 743	.0003 683
.29	.0086 016	.0048 335 ⁻	.0027 070	.0015 117	.0008 421	.0004 681
.30	.0099 650 ⁻	.0056 946	.0032 434	.0018 421	.0010 436	.0005 900
.31	.0114 862	.0066 715 ⁺	.0038 622	.0022 295 ⁺	.0012 839	.0007 378
.32	.0131 768	.0077 749	.0045 725 ⁻	.0026 815 ⁺	.0015 688	.0009 158
.33	.0150 490	.0090 160	.0053 840	.0032 061	.0019 045 ⁺	.0011 290
.34	.0171 152	.0104 067	.0063 071	.0038 118	.0022 982	.0013 828
.35	.0193 881	.0119 591	.0073 529	.0045 083	.0027 576	.0016 832
.36	.0218 808	.0136 861	.0085 330	.0053 055 ⁺	.0032 909	.0020 371
.37	.0246 066	.0156 010	.0098 598	.0062 144	.0039 075	.0024 518
.38	.0275 791	.0177 177	.0113 464	.0072 464	.0046 171	.0029 358
.39	.0308 123	.0200 504	.0130 063	.0084 142	.0054 307	.0034 979
.40	.0343 200	.0226 139	.0148 541	.0097 308	.0063 598	.0041 482
.41	.0381 168	.0254 235 ⁺	.0169 046	.0112 104	.0074 170	.0048 973
.42	.0422 170	.0284 949	.0191 738	.0128 676	.0086 158	.0057 573
.43	.0466 352	.0318 441	.0216 778	.0147 184	.0099 705	.0067 407
.44	.0513 862	.0354 876	.0244 337	.0167 792	.0114 965 ⁺	.0078 614
.45	.0564 848	.0394 425 ⁻	.0274 593	.0190 674	.0132 104	.0091 345 ⁺
.46	.0619 459	.0437 258	.0307 728	.0216 013	.0151 295 ⁺	.0105 760
.47	.0677 844	.0483 552	.0343 931	.0244 002	.0172 724	.0122 031
.48	.0740 152	.0533 484	.0383 397	.0274 839	.0196 587	.0140 344
.49	.0806 531	.0587 236	.0426 327	.0308 734	.0223 690	.0160 896
.50	.0877 129	.0644 991	.0472 926	.0345 904	.0252 452	.0183 898
.51	.0952 093	.0706 933	.0523 406	.0386 573	.0284 901	.0209 574
.52	.1031 566	.0773 249	.0577 983	.0430 976	.0320 678	.0238 163
.53	.1115 691	.0844 124	.0636 876	.0479 354	.0360 034	.0269 915
.54	.1204 608	.0919 746	.0700 309	.0531 954	.0403 231	.0305 096
.55	.1298 453	.1000 302	.0768 508	.0589 033	.0450 542	.0343 986
.56	.1397 359	.1085 977	.0841 704	.0650 853	.0502 250 ⁻	.0386 879
.57	.1501 453	.1176 955 ⁺	.0920 128	.0717 683	.0558 649	.0434 082
.58	.1610 860	.1273 419	.1004 012	.0789 795 ⁺	.0620 043	.0485 919
.59	.1725 696	.1375 546	.1093 591	.0867 469	.0686 745 ⁻	.0542 724
.60	.1846 073	.1483 512	.1189 096	.0950 988	.0759 075 ⁻	.0604 847

TABLE I. THE $I_w(p, q)$ FUNCTION

33

 $p = .61$ to 1.00 $q = 1.5$ $p = 4.5$ to 7

p	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$
$I(p, q) \times 10^4$	8590.2024×10^4	7388.1674×10^4	6142.7193×10^4	5083.2057×10^4	5062.1366×10^4	4546.5645×10^4
.61	.1072 006	.1507 487	.1200 761	.1040 635 ⁺	.0837 363	.0672 649
.62	.2103 860	.1717 635 ⁺	.1308 814	.1136 701	.0921 046	.0746 507
.63	.2241 453	.1844 115 ⁺	.1513 482	.1239 472	.1013 166	.0826 804
.64	.2384 955 ⁻	.1977 076	.1634 986	.1349 239	.1111 371	.0913 938
.65	.2534 431	.2116 650	.1763 542	.1466 287	.1216 912	.1008 316
.66	.2680 938	.2262 096	.1899 359	.1590 899	.1330 141	.1110 351
.67	.2831 520	.2416 205 ⁻	.2042 635 ⁻	.1723 356	.1451 413	.1220 464
.68	.3010 207	.2576 393	.2193 560	.1863 929	.1581 070	.1339 081
.69	.3193 013	.2743 652	.2352 300	.2012 881	.1719 488	.1466 629
.70	.3372 936	.2918 056	.2519 645 ⁻	.2170 463	.1866 982	.1603 538
.71	.3558 957	.3099 664	.2693 911	.2336 915 ⁻	.2023 893	.1750 233
.72	.3751 036	.3288 512	.2877 033	.2512 456	.2190 543	.1907 133
.73	.3949 112	.3484 613	.3068 514	.2697 290	.2367 237	.2074 648
.74	.4153 103	.3687 957	.3268 431	.2891 593	.2554 260	.2253 174
.75	.4362 890	.3898 506	.3476 835 ⁺	.3095 517	.2751 874	.2443 089
.76	.4578 364	.4116 190	.3693 742	.3309 181	.2960 310	.2644 744
.77	.4799 320	.4340 904	.3919 133	.3532 668	.3179 768	.2858 463
.78	.5025 596	.4572 500	.4152 948	.3766 017	.3410 403	.3084 530
.79	.5256 927	.4810 820	.4395 079	.4009 220	.3652 324	.3323 184
.80	.5493 045 ⁻	.5055 606	.4645 370	.4262 214	.3905 580	.3574 607
.81	.5733 629	.5306 587	.4903 602	.4524 871	.4170 159	.3838 916
.82	.5978 309	.5563 420	.5169 491	.4796 092	.4445 967	.4116 149
.83	.6226 659	.5825 700	.5442 680	.5078 293	.4732 823	.4406 250 ⁻
.84	.6478 103	.6092 947	.5722 725 ⁻	.5368 395 ⁻	.5030 441	.4709 052
.85	.6732 356	.6364 599	.6009 084	.5666 800	.5338 413	.5024 260
.86	.6988 513	.6630 997	.6301 105 ⁻	.5972 918	.5656 191	.5351 422
.87	.7245 942	.6918 376	.6598 007	.6285 958	.5983 058	.5689 903
.88	.7503 817	.7198 845 ⁻	.6898 861	.6604 992	.6318 104	.6038 853
.89	.7761 192	.7480 363	.7202 562	.6928 880	.6660 184	.6397 158
.90	.8016 970	.7761 721	.7507 799	.7256 239	.7007 878	.6763 394
.91	.8266 920	.8041 498	.7813 011	.7585 394	.7359 425 ⁻	.7135 751
.92	.8518 548	.8318 018	.8116 331	.7914 310	.7712 652	.7511 948
.93	.8761 134	.8589 288	.8415 513	.8240 505 ⁺	.8064 865 ⁻	.7889 107
.94	.8995 668	.8852 900	.8707 814	.8560 916	.8412 695 ⁻	.8263 578
.95	.9219 445 ⁻	.9105 892	.8989 835 ⁻	.8871 703	.8751 875 ⁺	.8630 684
.96	.9429 462	.9344 516	.9257 240	.9167 937	.9076 876	.8984 295 ⁻
.97	.9621 475 ⁻	.9563 819	.9504 273	.9443 028	.9380 252	.9316 097
.98	.9789 550 ⁺	.9756 769	.9722 740	.9687 560	.9651 314	.9614 082
.99	.9924 068	.9911 908	.9899 283	.9886 165 ⁻	.9872 580	.9858 555 ⁻
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .10$ to $.70$ $q = 1.5$ $p = 7.5$ to 10

	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$B(p, q) = .4112\ 9860 \times \frac{x}{10}$	$.3744\ 2296 \times \frac{x}{10}$	$.3427\ 4883 \times \frac{x}{10}$	$.3153\ 0355 \times \frac{x}{10}$	$.2913\ 3051 \times \frac{x}{10}$	$.2702\ 0018 \times \frac{x}{10}$	
x						
.10	.0000 001					
.11	.0000 002	.0000 001				
.12	.0000 004	.0000 001				
.13	.0000 007	.0000 003	.0000 001			
.14	.0000 012	.0000 005	.0000 002	.0000 001		
.15	.0000 020	.0000 008	.0000 003	.0000 001	.0000 001	
.16	.0000 032	.0000 013	.0000 005 ⁺	.0000 002	.0000 001	
.17	.0000 051	.0000 021	.0000 009	.0000 004	.0000 002	.0000 001
.18	.0000 077	.0000 034	.0000 015	.0000 006	.0000 003	.0000 001
.19	.0000 115 ⁺	.0000 052	.0000 023	.0000 010	.0000 005	.0000 002
.20	.0000 168	.0000 077	.0000 036	.0000 016	.0000 007	.0000 003
.21	.0000 241	.0000 114	.0000 054	.0000 025 ⁺	.0000 012	.0000 006
.22	.0000 340	.0000 164	.0000 079	.0000 038	.0000 018	.0000 009
.23	.0000 473	.0000 233	.0000 115	.0000 057	.0000 028	.0000 014
.24	.0000 647	.0000 326	.0000 164	.0000 082	.0000 041	.0000 021
.25	.0000 873	.0000 449	.0000 231	.0000 118	.0000 061	.0000 031
.26	.0001 105 ⁺	.0000 611	.0000 320	.0000 167	.0000 087	.0000 046
.27	.0001 538	.0000 822	.0000 439	.0000 234	.0000 124	.0000 066
.28	.0002 008	.0001 093	.0000 594	.0000 322	.0000 175	.0000 095
.29	.0002 597	.0001 439	.0000 796	.0000 439	.0000 242	.0000 134
.30	.0003 329	.0001 875 ⁺	.0001 055	.0000 593	.0000 332	.0000 186
.31	.0004 232	.0002 423	.0001 385 ⁺	.0000 791	.0000 451	.0000 257
.32	.0005 336	.0003 104	.0001 803	.0001 046	.0000 606	.0000 351
.33	.0006 680	.0003 946	.0002 327	.0001 371	.0000 807	.0000 474
.34	.0008 304	.0004 979	.0002 981	.0001 782	.0001 064	.0000 635
.35	.0010 255 ⁺	.0006 238	.0003 789	.0002 298	.0001 392	.0000 843
.36	.0012 586	.0007 764	.0004 782	.0002 942	.0001 807	.0001 109
.37	.0015 357	.0009 603	.0005 996	.0003 739	.0002 320	.0001 449
.38	.0018 633	.0011 807	.0007 471	.0004 721	.0002 980	.0001 879
.39	.0022 489	.0014 436	.0009 253	.0005 923	.0003 787	.0002 419
.40	.0027 008	.0017 556	.0011 396	.0007 387	.0004 783	.0003 004
.41	.0032 279	.0021 241	.0013 958	.0009 160	.0006 005	.0003 932
.42	.0038 403	.0025 576	.0017 009	.0011 207	.0007 495	.0004 962
.43	.0045 491	.0030 652	.0020 625	.0013 860	.0009 303	.0006 238
.44	.0053 663	.0036 574	.0024 892	.0016 920	.0011 488	.0007 792
.45	.0063 052	.0043 455	.0029 907	.0020 557	.0014 114	.0009 680
.46	.0073 801	.0051 420	.0035 777	.0024 802	.0017 257	.0011 966
.47	.0086 067	.0060 610	.0042 623	.0029 038	.0021 004	.0014 721
.48	.0100 020	.0071 174	.0050 578	.0035 898	.0025 450	.0018 024
.49	.0115 844	.0083 280	.0059 789	.0042 872	.0030 707	.0021 972
.50	.0133 735	.0097 109	.0070 419	.0051 002	.0036 899	.0026 668
.51	.0153 906	.0112 857	.0082 645 ⁺	.0060 448	.0044 165	.0032 235
.52	.0176 587	.0130 738	.0096 665	.0071 386	.0052 660	.0038 808
.53	.0202 021	.0150 983	.0112 691	.0084 010	.0062 561	.0046 542
.54	.0230 468	.0173 842	.0130 957	.0098 535 ⁺	.0074 060	.0055 610
.55	.0262 208	.0199 583	.0151 718	.0115 197	.0087 374	.0066 207
.56	.0297 533	.0228 494	.0175 249	.0134 255	.0102 741	.0078 549
.57	.0336 757	.0260 883	.0201 847	.0155 990	.0120 424	.0092 879
.58	.0380 211	.0297 081	.0231 834	.0180 710	.0140 713	.0109 465
.59	.0428 241	.0337 438	.0265 556	.0208 750	.0163 926	.0128 606
.60	.0481 215	.0382 328	.0303 385	.0240 472	.0190 410	.0150 630
.61	.0539 516	.0432 144	.0345 717	.0276 267	.0220 545 ⁺	.0175 899
.62	.0603 545 ⁺	.0487 306	.0392 976	.0316 558	.0254 744	.0204 812
.63	.0673 722	.0548 253	.0445 615	.0361 798	.0293 454	.0237 805
.64	.0750 480	.0615 447	.0504 112	.0412 472	.0337 161	.0275 352
.65	.0834 271	.0689 372	.0568 973	.0469 102	.0386 385 ⁺	.0317 972
.66	.0925 559	.0770 534	.0640 733	.0532 238	.0441 690	.0366 223
.67	.1024 824	.0859 459	.0719 955	.0602 469	.0503 677	.0420 719
.68	.1132 555 ⁺	.0956 691	.0807 226	.0680 415	.0572 989	.0482 110
.69	.1249 254	.1062 794	.0903 161	.0766 732	.0650 310	.0551 100
.70	.1375 427	.1178 345	.1008 400	.0862 107	.0736 368	.0628 442

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to 1.00 $q = 1.5$ $p = 7.5$ to 10

	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$I_x(p, q) \times 10^4$	$.4112 \ 9860 \times \frac{1}{10}$	$.3744 \ 2290 \times \frac{1}{10}$	$.3427 \ 4883 \times \frac{1}{10}$	$.3153 \ 0355 \times \frac{1}{10}$	$.2913 \ 3651 \times \frac{1}{10}$	$.2702 \ 6018 \times \frac{1}{10}$
.71	.1511 588	.1303 936	.1123 602	.0967 261	.0831 928	.0714 941
.72	.1658 250 ⁺	.1440 160	.1249 449	.1082 942	.0937 798	.0811 449
.73	.1815 925 ⁺	.1587 653	.1386 638	.1209 928	.1054 823	.0918 870
.74	.1985 120	.1746 999	.1535 879	.1349 019	.1183 885 ⁺	.1038 152
.75	.2166 328	.1918 816	.1697 891	.1501 036	.1325 897	.1170 293
.76	.2360 625 ⁺	.2103 703	.1873 393	.1666 812	.1481 798	.1316 328
.77	.2566 664	.2302 245 ⁺	.2063 101	.1847 189	.1652 549	.1477 329
.78	.2786 666	.2515 003	.2267 716	.2043 007	.1839 125 ⁺	.1654 397
.79	.3020 410	.2742 503	.2487 917	.2255 005 ⁺	.2042 503	.1848 650 ⁺
.80	.3268 224	.2985 220	.2724 346	.2484 259	.2263 649	.2061 217
.81	.3530 371	.3243 604	.2977 595 ⁺	.2731 265 ⁺	.2503 508	.2293 214
.82	.3807 640	.3517 979	.3248 191	.2996 824	.2762 979	.2545 735 ⁺
.83	.4098 320	.3808 611	.3536 573	.3281 568	.3042 897	.2819 821
.84	.4404 191	.4115 644	.3843 070	.3586 027	.3344 003	.3116 434
.85	.4724 492	.4439 082	.4167 870	.3910 593	.3666 910	.3436 421
.86	.5058 902	.4778 758	.4510 988	.4255 486	.4012 065 ⁺	.3780 472
.87	.5406 898	.5134 295 ⁺	.4872 222	.4620 705 ⁺	.4379 691	.4149 050
.88	.5767 725 ⁺	.5505 064	.5251 102	.5005 972	.4769 731	.4542 371
.89	.6140 336	.5890 124	.5646 826	.5410 659	.5181 766	.4960 229
.90	.6523 338	.6288 151	.6058 180	.5833 699	.5614 912	.5401 970
.91	.6914 911	.6697 350 ⁺	.6483 436	.6273 470	.6067 697	.5866 310
.92	.7312 700	.7115 334	.6920 213	.6727 643	.6537 884	.6351 153
.93	.7713 677	.7538 693	.7365 299	.7192 977	.7022 249	.6853 335 ⁺
.94	.8113 943	.7964 117	.7814 304	.7665 031	.7516 255 ⁺	.7368 270
.95	.8508 424	.8385 360	.8261 728	.8137 737	.8013 580	.7889 420
.96	.8890 407	.8795 405 ⁺	.8699 403	.8602 738	.8505 374	.8407 502
.97	.9250 698	.9184 180	.9116 653	.9048 222	.8978 981	.8909 017
.98	.9575 932	.9536 930	.9497 133	.9456 595 ⁺	.9415 367	.9373 494
.99	.9844 110	.9829 268	.9814 047	.9798 463	.9782 533	.9766 271
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION $p = .81$ to 1.00 $q = 1.5$ $p = 10.5$ to 15

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .2516\ 0880 \times \frac{1}{10}$	$.2350\ 0886 \times \frac{1}{10}$	$.2068\ 0779 \times \frac{1}{10}$	$.1838\ 2915 \times \frac{1}{10}$	$.1648\ 1234 \times \frac{1}{10}$	$.1488\ 6276 \times \frac{1}{10}$	
x						
.81	.2099 286	.1920 652	.1605 160	.1338 963	.1115 051	.0927 205 ⁻
.82	.2344 164	.2157 347	.1824 393	.1539 995 ⁺	.1297 819	.1092 143
.83	.2611 580	.2417 407	.2068 222	.1766 323	.1506 109	.1282 418
.84	.2902 722	.2702 252	.2338 525 ⁺	.2020 264	.1742 643	.1501 112
.85	.3218 683	.3013 223	.2637 153	.2304 175 ⁺	.2010 258	.1751 506
.86	.3560 408	.3351 534	.2965 880	.2620 398	.2311 856	.2037 033
.87	.3928 636	.3718 209	.3326 332	.2971 193	.2650 339	.2361 227
.88	.4323 830	.4114 004	.3719 905 ⁺	.3358 649	.3028 516	.2727 623
.89	.4746 078	.4539 301	.4147 648	.3784 552	.3448 968	.3139 631
.90	.5194 974	.4993 986	.4610 110	.4250 227	.3913 874	.3600 345 ⁺
.91	.5669 463	.5477 269	.5107 149	.4756 307	.4424 761	.4112 278
.92	.6167 629	.5987 463	.5637 659	.5302 431	.4982 159	.4676 986
.93	.6686 422	.6521 674	.6199 209	.5886 821	.5585 126	.5294 529
.94	.7221 254	.7075 367	.6787 524	.6505 677	.6230 551	.5962 697
.95	.7765 432	.7641 736	.7395 734	.7152 295 ⁺	.6912 133	.6675 831
.96	.8309 243	.8210 705 ⁻	.8013 191	.7815 678	.7618 772	.7422 992
.97	.8838 410	.8767 236	.8623 457	.8478 181	.8331 843	.8184 826
.98	.9331 019	.9287 983	.9200 372	.9110 937	.9019 919	.8927 536
.99	.9749 692	.9732 807	.9698 173	.9662 456	.9625 736	.9588 085 ⁺
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $p = 16 \text{ to } 21$ $x = .33 \text{ to } 1.00$ $q = 1.5$

	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$B(p, q) = .1353\ 2978 \times \frac{x}{10}$	$.1237\ 3009 \times \frac{x}{10}$	$.1136\ 9792 \times \frac{x}{10}$	$.1049\ 5192 \times \frac{x}{10}$	$.09727\ 2514 \times \frac{x}{10}$	$.09048\ 6059 \times \frac{x}{10}$	
x						
.33	.0000 001					
.34	.0000 001					
.35	.0000 002	.0000 001				
.36	.0000 003	.0000 001				
.37	.0000 005	.0000 002	.0000 001			
.38	.0000 007	.0000 003	.0000 001	.0000 001		
.39	.0000 011	.0000 004	.0000 002	.0000 001		
.40	.0000 016	.0000 006	.0000 003			
.41	.0000 023	.0000 010	.0000 004	.0000 002	.0000 001	
.42	.0000 034	.0000 015	.0000 006	.0000 003	.0000 001	.0000 001
.43	.0000 049	.0000 022	.0000 010	.0000 004	.0000 002	.0000 001
.44	.0000 070	.0000 032	.0000 014	.0000 006	.0000 003	.0000 002
.45	.0000 099	.0000 046	.0000 021	.0000 010	.0000 005	.0000 003
.46	.0000 140	.0000 066	.0000 031	.0000 015	.0000 007	.0000 003
.47	.0000 195 ⁺	.0000 094	.0000 046	.0000 022	.0000 011	.0000 005
.48	.0000 271	.0000 134	.0000 066	.0000 032	.0000 016	.0000 008
.49	.0000 374	.0000 189	.0000 095	.0000 048	.0000 024	.0000 012
.50	.0000 513	.0000 263	.0000 135 ⁺	.0000 069	.0000 035 ⁺	.0000 018
.51	.0000 697	.0000 366	.0000 191	.0000 100	.0000 052	.0000 027
.52	.0000 943	.0000 504	.0000 269	.0000 143	.0000 076	.0000 041
.53	.0001 267	.0000 690	.0000 375 ⁺	.0000 204	.0000 111	.0000 060
.54	.0001 692	.0000 939	.0000 520	.0000 288	.0000 159	.0000 088
.55	.0002 248	.0001 270	.0000 717	.0000 404	.0000 228	.0000 128
.56	.0002 969	.0001 709	.0000 982	.0000 563	.0000 323	.0000 185
.57	.0003 902	.0002 285 ⁺	.0001 336	.0000 780	.0000 455 ⁺	.0000 265 ⁺
.58	.0005 101	.0003 039	.0001 809	.0001 075	.0000 638	.0000 378
.59	.0006 636	.0004 022	.0002 434	.0001 471	.0000 888	.0000 536
.60	.0008 590	.0005 294	.0003 258	.0002 003	.0001 230	.0000 754
.61	.0011 068	.0006 934	.0004 339	.0002 711	.0001 602	.0001 055 ⁺
.62	.0014 197	.0009 040	.0005 748	.0003 651	.0002 316	.0001 468
.63	.0018 130	.0011 729	.0007 578	.0004 890	.0003 152	.0002 030
.64	.0023 052	.0015 149	.0009 941	.0006 516	.0004 267	.0002 791
.65	.0029 188	.0019 479	.0012 982	.0008 642	.0005 746	.0003 817
.66	.0036 807	.0024 938	.0016 875	.0011 405	.0007 700	.0005 193
.67	.0046 230	.0031 794	.0021 837	.0014 981	.0010 266	.0007 028
.68	.0057 840	.0040 367	.0028 136	.0019 589	.0013 623	.0009 465
.69	.0072 089	.0051 046	.0036 099	.0025 499	.0017 993	.0012 684
.70	.0089 515	.0064 295 ⁺	.0046 122	.0033 048	.0023 655	.0016 914
.71	.0110 746	.0080 670	.0058 688	.0042 648	.0030 959	.0022 454
.72	.0136 523	.0100 833	.0074 380	.0054 806	.0040 341	.0029 666
.73	.0167 706	.0125 566	.0093 899	.0070 139	.0052 339	.0039 010
.74	.0205 298	.0155 793	.0118 081	.0089 399	.0067 616	.0051 094
.75	.0250 458	.0192 599	.0147 927	.0113 493	.0086 988	.0066 612
.76	.0304 522	.0237 252	.0184 623	.0143 514	.0111 449	.0086 471
.77	.0369 021	.0291 230	.0229 569	.0180 771	.0142 208	.0111 772
.78	.0445 703	.0356 241	.0284 409	.0226 824	.0180 726	.0143 870
.79	.0536 551	.0434 257	.0351 068	.0283 523	.0228 759	.0184 414
.80	.0643 805 ⁺	.0527 534	.0431 781	.0353 052	.0288 410	.0235 404
.81	.0769 977	.0638 643	.0529 134	.0437 967	.0362 170	.0299 250
.82	.0917 866	.0770 493	.0646 093	.0541 252	.0453 020	.0378 800
.83	.1090 565 ⁺	.0926 351	.0786 045 ⁺	.0666 356	.0564 400	.0477 661
.84	.1291 464	.1109 856	.0952 818	.0817 242	.0700 362	.0599 728
.85	.1524 235	.1325 018	.1150 703	.0998 420	.0865 572	.0749 820
.86	.1792 807	.1576 210	.1384 457	.1214 969	.1065 373	.0933 505
.87	.2101 315	.1868 125	.1659 283	.1472 543	.1305 804	.1157 115
.88	.2454 012	.2205 709	.1980 776	.1777 337	.1593 590	.1427 867
.89	.2855 145	.2594 039	.2354 821	.2136 002	.1936 120	.1753 794
.90	.3308 764	.3038 139	.2787 414	.2555 493	.2341 271	.2143 951
.91	.3818 441	.3542 692	.3284 381	.3042 789	.2817 154	.2606 604
.92	.4386 867	.4111 618	.3850 940	.3604 455	.3371 721	.3152 253
.93	.5015 266	.4747 435	.4491 026	.4245 942	.4012 016	.3789 025
.94	.5702 521	.5450 313	.5206 264	.4970 486	.4743 022	.4523 861
.95	.6443 861	.6216 603	.5994 358	.5777 361	.5505 788	.5359 760
.96	.7228 777	.7036 505 ⁺	.6846 495 ⁺	.6659 018	.6474 305	.6292 546
.97	.8037 466	.7890 059	.7742 870	.7596 130	.7450 046	.7304 803
.98	.8833 983	.8739 436	.8644 054	.8547 984	.8451 357	.8354 296
.99	.9549 568	.9510 245 ⁺	.9470 170	.9429 394	.9387 963	.9345 921
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_w(p, q)$ FUNCTION

39

4.4 to 1.00

 $q = 1.5$ $p = 22$ to 27

	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$
$I(p, q)$	0.84453055×10^1	0.70002997×10^1	0.74222405×10^1	0.69850381×10^1	0.65902246×10^1	0.62307578×10^1
44	0000 001					
45	0000 001					
46	0000 002	0000 001				
47	0000 002	0000 001	0000 001			
48	0000 001	0000 002	0000 001			
49	0000 000	0000 003	0000 002	0000 001		
50	0000 000	0000 005	0000 002	0000 001	0000 001	
51	0000 014	0000 007	0000 004	0000 002	0000 001	0000 001
52	0000 012	0000 011	0000 006	0000 003	0000 002	0000 001
53	0000 032	0000 018	0000 009	0000 005 ⁺	0000 003	0000 001
54	0000 040	0000 027	0000 015 ⁺	0000 008	0000 004	0000 002
55	0000 072	0000 040	0000 023	0000 013	0000 007	0000 004
56	0000 106	0000 060	0000 035 ⁺	0000 020	0000 011	0000 006
57	0000 155 ⁺	0000 090	0000 052	0000 030	0000 018	0000 010
58	0000 224	0000 133	0000 078	0000 046	0000 027	0000 016
59	0000 323	0000 194	0000 117	0000 070	0000 042	0000 025 ⁺
60	0000 462	0000 283	0000 173	0000 106	0000 065 ⁺	0000 039
61	0000 657	0000 409	0000 255 ⁺	0000 158	0000 098	0000 061
62	0000 929	0000 588	0000 372	0000 235 ⁺	0000 148	0000 093
63	0001 306	0000 839	0000 539	0000 346	0000 222	0000 142
64	0001 824	0001 191	0000 777	0000 507	0000 330	0000 215 ⁺
65	0002 533	0001 080	0001 113	0000 737	0000 488	0000 323
66	0003 499	0002 356	0001 585 ⁺	0001 066	0000 716	0000 481
67	0004 808	0003 286	0002 244	0001 531	0001 044	0000 712
68	0006 570	0004 557	0003 158	0002 187	0001 514	0001 047
69	0008 933	0006 287	0004 421	0003 107	0002 182	0001 531
70	0012 085 ⁺	0008 628	0006 155 ⁺	0004 387	0003 126	0002 225 ⁺
71	0016 270	0011 780	0008 522	0006 162	0004 452	0003 215 ⁺
72	0021 797	0016 003	0011 740	0008 607	0006 306	0004 617
73	0029 065 ⁺	0021 633	0016 089	0011 958	0008 882	0006 594
74	0038 576	0029 102	0021 940	0016 529	0012 444	0009 364
75	0050 967	0038 966	0029 760	0022 728	0017 342	0013 225 ⁺
76	0067 035 ⁺	0051 928	0040 197	0031 096	0024 041	0018 576
77	0087 779	0068 884	0054 018	0042 333	0033 156	0025 954
78	0114 438	0090 959	0072 248	0057 349	0045 495 ⁺	0036 071
79	0148 546	0119 567	0096 176	0077 312	0062 111	0049 872
80	0191 990	0156 469	0127 434	0103 723	0084 374	0068 598
81	0247 074	0203 847	0168 072	0138 490	0114 049	0093 872
82	0316 602	0264 390	0220 645 ⁺	0184 027	0153 399	0127 802
83	0403 954	0341 386	0288 326	0243 368	0205 307	0173 109
84	0513 182	0438 832	0375 020	0320 301	0273 418	0233 279
85	0649 105 ⁺	0561 544	0485 499	0419 514	0362 305 ⁺	0312 742
86	0817 398	0715 276	0625 543	0546 764	0477 660	0417 087
87	1024 675 ⁺	0906 834	0802 083	0709 052	0626 495 ⁺	0553 290
88	1278 551	1144 166	1023 337	0914 792	0817 362	0729 975 ⁺
89	1587 653	1436 426	1298 909	1173 968	1060 547	0957 662
90	1961 559	1793 951	1639 825 ⁺	1498 222	1368 230	1248 987
91	2410 613	2228 126	2058 452	1900 832	1754 529	1618 834
92	2945 535	2751 032	2568 199	2396 489	2235 356	2084 262
93	3576 797	3374 703	3182 872	3000 696	2827 884	2664 078
94	4312 944	4110 177	3915 432	3728 558	3549 383	3377 720
95	5159 391	4964 706	4775 734	4592 471	4414 889	4242 942
96	6113 904	5938 500	5766 470	5597 872	5432 780	5271 244
97	7160 562	7017 469	6875 651	6735 222	6596 282	6458 918
98	8256 911	8159 305 ⁺	8061 571	7963 797	7866 062	7768 440
99	9303 308	9260 163	9216 521	9172 414	9127 876	9082 935 ⁺
100	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .53$ to 1.00 $q = 1.5$ $p = 28$ to 33

	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$
$B(p, q) = .5902\ 8232 \times \frac{1}{10^8}$		$.5602\ 6797 \times \frac{1}{10^8}$	$.5327\ 1380 \times \frac{1}{10^8}$	$.5073\ 4648 \times \frac{1}{10^8}$	$.4839\ 3049 \times \frac{1}{10^8}$	$.4622\ 6196 \times \frac{1}{10^8}$
x						
.53	.0000 001					
.54	.0000 001	.0000 001				
.55	.0000 002	.0000 001	.0000 001			
.56	.0000 004	.0000 002	.0000 001	.0000 001		
.57	.0000 006	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.58	.0000 010	.0000 006	.0000 003	.0000 002	.0000 002	.0000 001
.59	.0000 015 ⁺	.0000 009	.0000 005 ⁺	.0000 003	.0000 003	.0000 002
.60	.0000 024	.0000 015 ⁻	.0000 009	.0000 005 ⁺		
.61	.0000 038	.0000 023	.0000 015 ⁻	.0000 009	.0000 006	.0000 003
.62	.0000 059	.0000 037	.0000 023	.0000 015 ⁻	.0000 009	.0000 006
.63	.0000 091	.0000 058	.0000 037	.0000 024	.0000 015 ⁺	.0000 010
.64	.0000 140	.0000 091	.0000 059	.0000 038	.0000 025 ⁻	.0000 016
.65	.0000 213	.0000 141	.0000 093	.0000 061	.0000 040	.0000 027
.66	.0000 323	.0000 216	.0000 145 ⁺	.0000 097	.0000 065 ⁺	.0000 044
.67	.0000 485 ⁻	.0000 330	.0000 225 ⁻	.0000 153	.0000 104	.0000 071
.68	.0000 724	.0000 500 ⁺	.0000 345 ⁺	.0000 238	.0000 165 ⁻	.0000 113
.69	.0001 074	.0000 753	.0000 528	.0000 370	.0000 250	.0000 181
.70	.0001 584	.0001 126	.0000 801	.0000 569	.0000 404	.0000 287
.71	.0002 320	.0001 674	.0001 207	.0000 870	.0000 626	.0000 451
.72	.0003 379	.0002 472	.0001 807	.0001 320	.0000 965 ⁻	.0000 704
.73	.0004 892	.0003 628	.0002 689	.0001 992	.0001 475 ⁺	.0001 092
.74	.0007 042	.0005 293	.0003 977	.0002 987	.0002 242	.0001 682
.75	.0010 079	.0007 678	.0005 846	.0004 449	.0003 385 ⁺	.0002 574
.76	.0014 345 ⁺	.0011 073	.0008 543	.0006 588	.0005 079	.0003 913
.77	.0020 305 ⁺	.0015 878	.0012 410	.0009 696	.0007 572	.0005 911
.78	.0028 585 ⁻	.0022 641	.0017 925 ⁻	.0014 185 ⁻	.0011 221	.0008 872
.79	.0040 024	.0032 105 ⁻	.0025 741	.0020 630	.0016 527	.0013 245
.80	.0055 743	.0045 275 ⁺	.0036 757	.0029 829	.0024 197	.0019 620
.81	.0077 225 ⁺	.0063 501	.0052 193	.0042 880	.0035 215 ⁺	.0028 910
.82	.0106 423	.0088 580	.0073 696	.0061 288	.0050 949	.0042 339
.83	.0145 890	.0122 894	.0103 479	.0087 096	.0073 278	.0061 631
.84	.0198 938	.0169 576	.0144 487	.0123 061	.0104 772	.0089 170
.85	.0269 834	.0232 710	.0200 611	.0172 872	.0148 914	.0128 231
.86	.0364 029	.0317 585 ⁺	.0276 955 ⁻	.0241 430	.0210 386	.0183 271
.87	.0488 422	.0430 979	.0380 142	.0335 177	.0295 426	.0260 303
.88	.0651 650 ⁺	.0581 494	.0518 691	.0462 504	.0412 262	.0367 358
.89	.0864 397	.0779 910	.0703 420	.0634 209	.0571 618	.0515 042
.90	.1139 681	.1039 549	.0947 877	.0863 996	.0787 287	.0717 160
.91	.1493 064	.1376 569	.1268 732	.1168 964	.1076 711	.0991 449
.92	.1942 683	.1810 103	.1686 027	.1569 974	.1461 484	.1360 113
.93	.2508 917	.2362 041	.2223 090	.2091 713	.1967 562	.1850 297
.94	.3213 368	.3056 118	.2905 756	.2762 059	.2624 805 ⁻	.2493 771
.95	.4076 567	.3915 688	.3760 219	.3610 061	.3465 110	.3325 255 ⁺
.96	.5113 298	.4958 963	.4808 246	.4661 146	.4517 653	.4377 747
.97	.6323 207	.6189 217	.6057 006	.5926 623	.5798 113	.5671 509
.98	.7670 998	.7573 800	.7476 904	.7380 363	.7284 226	.7188 541
.99	.9037 620	.8991 957	.8945 970	.8899 685 ⁺	.8853 124	.8806 308
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

41

59 to 100

 $q = 1.5$ $p = 34$ to 39

	$p = 34$	$p = 35$	$p = 36$	$p = 37$	$p = 38$	$p = 39$
$I_{\infty}(p, q)$	$1.4421 0361 \times 10^1$	$1.4234 8064 \times 10^1$	$1.4060 7733 \times 10^1$	$1.3898 3424 \times 10^1$	$1.3746 4589 \times 10^1$	$1.3604 1883 \times 10^1$
.59	.0000 001					
.60	.0000 001	.0000 001				
.61	.0000 002	.0000 001	.0000 001	.0000 001		
.62	.0000 004	.0000 002	.0000 001	.0000 001	.0000 001	
.63	.0000 006	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001
.64	.0000 011	.0000 007	.0000 004	.0000 003	.0000 002	.0000 001
.65	.0000 018	.0000 012	.0000 008	.0000 005 ⁺	.0000 003	.0000 002
.66	.0000 029	.0000 020	.0000 013	.0000 009	.0000 006	.0000 004
.67	.0000 048	.0000 033	.0000 022	.0000 015 ⁺	.0000 010	.0000 007
.68	.0000 078	.0000 054	.0000 037	.0000 026	.0000 018	.0000 012
.69	.0000 127	.0000 089	.0000 062	.0000 043	.0000 030	.0000 021
.70	.0000 204	.0000 144	.0000 102	.0000 073	.0000 051	.0000 036
.71	.0000 325 ⁺	.0000 234	.0000 168	.0000 121	.0000 087	.0000 062
.72	.0000 514	.0000 375 ⁺	.0000 274	.0000 199	.0000 145 ⁺	.0000 106
.73	.0000 808	.0000 598	.0000 442	.0000 327	.0000 241	.0000 178
.74	.0001 262	.0000 946	.0000 709	.0000 531	.0000 398	.0000 298
.75	.0001 957	.0001 487	.0001 130	.0000 858	.0000 651	.0000 494
.76	.0003 014	.0002 321	.0001 787	.0001 375 ⁻	.0001 058	.0000 813
.77	.0004 613	.0003 598	.0002 806	.0002 188	.0001 705 ⁻	.0001 328
.78	.0007 013	.0005 542	.0004 377	.0003 457	.0002 729	.0002 154
.79	.0010 595 ⁻	.0008 478	.0006 783	.0005 424	.0004 337	.0003 466
.80	.0015 904	.0012 887	.0010 439	.0008 454	.0006 844	.0005 539
.81	.0023 725 ⁻	.0019 463	.0015 962	.0013 087	.0010 727	.0008 790
.82	.0035 171	.0029 208	.0024 247	.0020 124	.0016 606	.0013 849
.83	.0051 817	.0043 551	.0036 593	.0030 737	.0025 811	.0021 669
.84	.0075 866	.0064 526	.0054 864	.0046 636	.0039 630	.0033 668
.85	.0110 384	.0094 992	.0081 721	.0070 284	.0060 431	.0051 946
.86	.0159 590	.0138 941	.0120 922	.0105 210	.0091 515 ⁺	.0079 583
.87	.0229 282	.0201 898	.0177 732	.0156 417	.0137 622	.0121 055 ⁻
.88	.0327 244	.0291 424	.0259 453	.0230 927	.0205 485 ⁺	.0182 802
.89	.0463 925 ⁺	.0417 763	.0376 092	.0338 480	.0304 571	.0273 986
.90	.0653 107	.0594 603	.0541 198	.0492 465 ⁺	.0448 013	.0407 480
.91	.0912 685 ⁻	.0839 956	.0772 827	.0710 891	.0653 767	.0601 101
.92	.1205 430	.1177 058	.1094 586	.1017 658	.0945 927	.0879 067
.93	.1739 588	.1635 114	.1536 566	.1443 644	.1356 058	.1273 531
.94	.2368 732	.2249 467	.2135 757	.2027 385 ⁻	.1924 138	.1825 809
.95	.3190 380	.3060 364	.2935 085 ⁺	.2814 417	.2698 233	.2586 405 ⁺
.96	.4241 402	.4108 586	.3979 261	.3853 385 ⁺	.3730 911	.3611 789
.97	.5546 844	.5424 140	.5303 416	.5184 688	.5067 966	.4953 256
.98	.7093 348	.6998 687	.6904 595 ⁻	.6811 103	.6718 243	.6626 043
.99	.8759 258	.8711 904	.8664 534	.8616 805 ⁺	.8569 096	.8521 152
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .64$ to 1.00 $q = 1.5$ $p = 40$ to 45

	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$B(p, q) = .3470\ 6998 \times \frac{1}{10^8}$	$.3345\ 2529 \times \frac{1}{10^8}$	$.3227\ 1851 \times \frac{1}{10^8}$	$.3115\ 9029 \times \frac{1}{10^8}$	$.3010\ 8724 \times \frac{1}{10^8}$	$.2911\ 6120 \times \frac{1}{10^8}$	
x						
.64	.0000 001	.0000.001				
.65	.0000 001	.0000 001	.0000 001			
.66	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001	.0000 001
.67	.0000 005	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.68	.0000 008	.0000 006	.0000 004	.0000 003	.0000 002	.0000 002
.69	.0000 015	.0000 010	.0000 007	.0000 005 ⁺	.0000 004	.0000 002
.70	.0000 026	.0000 018	.0000 013	.0000 009	.0000 006	.0000 005
.71	.0000 045	.0000 032	.0000 023	.0000 017	.0000 012	.0000 009
.72	.0000 077	.0000 056	.0000 041	.0000 030	.0000 022	.0000 016
.73	.0000 132	.0000 097	.0000 072	.0000 053	.0000 039	.0000 029
.74	.0000 223	.0000 167	.0000 125	.0000 094	.0000 070	.0000 052
.75	.0000 375 ⁺	.0000 284	.0000 216	.0000 164	.0000 124	.0000 094
.76	.0000 625 ⁺	.0000 481	.0000 369	.0000 284	.0000 218	.0000 167
.77	.0001 035	.0000 806	.0000 627	.0000 488	.0000 380	.0000 296
.78	.0001 699	.0001 340	.0001 057	.0000 833	.0000 657	.0000 518
.79	.0002 770	.0002 213	.0001 767	.0001 411	.0001 126	.0000 899
.80	.0004 482	.0003 626	.0002 932	.0002 371	.0001 916	.0001 549
.81	.0007 200	.0005 897	.0004 828	.0003 953	.0003 235	.0002 647
.82	.0011 484	.0009 521	.0007 892	.0006 540	.0005 418	.0004 488
.83	.0018 187	.0015 261	.0012 802	.0010 737	.0009 004	.0007 548
.84	.0028 596	.0024 282	.0020 614	.0017 496	.0014 847	.0012 506
.85	.0044 641	.0038 355	.0032 946	.0028 294	.0024 293	.0020 855
.86	.0069 190	.0060 139	.0052 261	.0045 406	.0039 441	.0034 254
.87	.0106 457	.0093 598	.0082 274	.0072 305 ⁺	.0063 531	.0055 811
.88	.0162 584	.0144 571	.0128 525 ⁺	.0114 237	.0101 518	.0090 197
.89	.0246 417	.0221 573	.0199 193	.0179 037	.0160 890	.0144 556
.90	.0370 532	.0336 864	.0306 193	.0278 260	.0252 828	.0229 686
.91	.0552 560	.0507 836	.0466 641	.0428 707	.0393 786	.0361 646
.92	.0816 767	.0758 735	.0704 694	.0654 384	.0607 561	.0563 995
.93	.1195 797	.1122 601	.1053 698	.0988 856	.0927 852	.0870 473
.94	.1732 195 ⁺	.1643 098	.1558 325 ⁺	.1477 690	.1401 012	.1328 115
.95	.2478 808	.2375 312	.2275 792	.2180 123	.2088 180	.1999 842
.96	.3495 966	.3383 385 ⁺	.3273 990	.3167 721	.3064 516	.2964 313
.97	.4840 560	.4729 879	.4621 208	.4514 543	.4409 875 ⁺	.4307 194
.98	.6534 529	.6443 723	.6353 649	.6264 325 ⁺	.6175 770	.6088 000
.99	.8473 079	.8424 892	.8376 605 ⁺	.8328 232	.8279 786	.8231 279
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .68$ to 1.00 $q = 1.5$ $p = 46$ to 50

	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$B(p, q) \times 10^4$	$.2817\ 6899 \times \frac{1}{10^4}$	$.2728\ 7102 \times \frac{1}{10^4}$	$.2644\ 3171 \times \frac{1}{10^4}$	$.2564\ 1863 \times \frac{1}{10^4}$	$.2488\ 0224 \times \frac{1}{10^4}$
.68	.0000 001	.0000 001			
.69	.0000 002	.0000 001	.0000 001	.0000 001	
.70	.0000 003	.0000 002	.0000 002	.0000 001	.0000 001
.71	.0000 006	.0000 004	.0000 003	.0000 002	.0000 002
.72	.0000 011	.0000 008	.0000 006	.0000 004	.0000 003
.73	.0000 021	.0000 016	.0000 012	.0000 009	.0000 006
.74	.0000 039	.0000 029	.0000 022	.0000 016	.0000 012
.75	.0000 071	.0000 054	.0000 041	.0000 031	.0000 023
.76	.0000 128	.0000 099	.0000 076	.0000 058	.0000 045
.77	.0000 230	.0000 179	.0000 139	.0000 108	.0000 084
.78	.0000 408	.0000 321	.0000 253	.0000 199	.0000 157
.79	.0000 717	.0000 572	.0000 457	.0000 364	.0000 290
.80	.0001 252	.0001 011	.0000 817	.0000 660	.0000 533
.81	.0002 165 ⁺	.0001 771	.0001 448	.0001 184	.0000 968
.82	.0003 716	.0003 077	.0002 547	.0002 108	.0001 745 ⁻
.83	.0006 327	.0005 302	.0004 443	.0003 722	.0003 117
.84	.0010 685 ⁻	.0009 061	.0007 683	.0006 514	.0005 521
.85	.0017 899	.0015 359	.0013 178	.0011 304	.0009 695 ⁺
.86	.0029 742	.0025 821	.0022 412	.0019 450 ⁺	.0016 877
.87	.0049 020	.0043 048	.0037 796	.0033 180	.0029 123
.88	.0080 125 ⁻	.0071 164	.0063 195 ⁺	.0056 110	.0049 810
.89	.0120 856	.0116 632	.0104 737	.0094 040	.0084 423
.90	.0208 615 ⁻	.0189 450 ⁻	.0172 018	.0156 166	.0141 753
.91	.0332 074	.0304 871	.0279 853	.0256 849	.0235 702
.92	.0523 468	.0485 778	.0450 735 ⁻	.0418 150	.0387 883
.93	.0816 518	.0765 794	.0718 119	.0673 319	.0631 231
.94	.1258 831	.1192 996	.1130 453	.1071 050 ⁻	.1014 641
.95	.1914 988	.1833 501	.1755 264	.1680 165 ⁺	.1608 093
.96	.2867 050 ⁻	.2772 662	.2681 086	.2592 257	.2506 111
.97	.4206 486	.4107 737	.4010 932	.3916 053	.3823 081
.98	.6000 939	.5914 783	.5829 452	.5744 957	.5661 306
.99	.8182 723	.8134 131	.8085 513	.8036 879	.7988 241
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$\epsilon = .01$ to $.60$

$q = 2$

$p = 2$ to 4.5

	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$	$p = 4.5$
$B(p, q) = .1666\ 6667$		$.1142\ 8571$	$.8333\ 3333 \times \frac{1}{10}$	$.6349\ 2063 \times \frac{1}{10}$	$.5000\ 0000 \times \frac{1}{10}$	$.4040\ 4040 \times \frac{1}{10}$
x						
.01	.0002 980 ^e	.0000 347	.0000 040	.0000 004	.0000 008	.0000 001
.02	.0011 840 ^e	.0001 952	.0000 315 ⁺	.0000 050 ⁺	.0000 040	.0000 008
.03	.0026 460 ^e	.0005 339	.0001 056	.0000 206	.0000 124	.0000 027
.04	.0046 720 ^e	.0010 880	.0002 483	.0000 558	.0000 300 ^e	.0000 074
.05	.0072 500 ^e	.0018 867	.0004 812	.0001 209	.0000 617	.0000 106
.06	.0103 680 ^e	.0029 541	.0008 251	.0002 270	.0001 133	.0000 329
.07	.0140 140 ^e	.0043 106	.0013 000	.0003 861	.0001 917	.0000 595 ¹
.08	.0181 760 ^e	.0059 736	.0019 251	.0006 111	.0003 044	.0001 003
.09	.0228 420 ^e	.0079 582	.0027 192	.0009 153	.0004 600 ^e	.0001 597
.10	.0280 000 ^e	.0102 774	.0037 000 ^e	.0013 123		
.11	.0336 380 ^e	.0129 423	.0048 848	.0018 165 ⁺	.0006 676	.0002 439
.12	.0397 440 ^e	.0159 626	.0062 899	.0024 423	.0009 373	.0003 593
.13	.0463 060 ^e	.0193 465 ⁻	.0079 312	.0032 042	.0012 795 ⁺	.0005 061
.14	.0533 120 ^e	.0231 010	.0098 235 ⁺	.0041 171	.0017 057	.0007 000
.15	.0607 500 ^e	.0272 319	.0119 812	.0051 958	.0022 275 ^e	.0009 460
.16	.0686 080 ^e	.0317 440 ^e	.0144 179	.0064 553	.0028 574	.0012 530
.17	.0768 740 ^e	.0366 410	.0171 464	.0079 103	.0036 081	.0016 306
.18	.0855 360 ^e	.0419 258	.0201 787	.0095 756	.0044 930	.0020 888
.19	.0945 820 ^e	.0476 003	.0235 264	.0114 658	.0055 256	.0026 386
.20	.1040 000 ^e	.0536 656	.0272 000 ^e	.0135 953	.0067 200 ^e	.0032 915
.21	.1137 780 ^e	.0601 222	.0312 096	.0159 784	.0080 904	.0040 595 ¹
.22	.1239 040 ^e	.0669 698	.0355 643	.0186 289	.0096 513	.0049 554
.23	.1343 660 ^e	.0742 071	.0402 728	.0215 607	.0114 175 ⁺	.0059 923
.24	.1451 520 ^e	.0818 326	.0453 427	.0247 868	.0134 038	.0071 841
.25	.1562 500 ^e	.0898 437	.0507 812	.0283 203	.0156 250 ^e	.0085 449
.26	.1676 480 ^e	.0982 377	.0565 947	.0321 737	.0180 962	.0100 895 ⁻
.27	.1793 340 ^e	.1070 109	.0627 888	.0363 591	.0208 325 ⁻	.0118 328
.28	.1912 960 ^e	.1161 591	.0693 683	.0408 880	.0238 487	.0137 901
.29	.2035 220 ^e	.1256 776	.0763 376	.0457 716	.0271 596	.0159 780
.30	.2160 000 ^e	.1355 613	.0837 000 ^e	.0510 204	.0307 800 ^e	.0184 117
.31	.2287 180 ^e	.1458 044	.0914 584	.0566 444	.0347 244	.0211 977
.32	.2416 640 ^e	.1564 007	.0996 147	.0626 530	.0390 070	.0240 825
.33	.2548 260 ^e	.1673 434	.1081 704	.0690 550 ⁻	.0436 419	.0273 526
.34	.2681 920 ^e	.1786 254	.1171 259	.0758 585 ⁻	.0486 426	.0309 347
.35	.2817 500 ^e	.1902 389	.1264 812	.0830 710	.0540 225 ^e	.0348 454
.36	.2954 880 ^e	.2021 760 ^e	.1362 355 ⁺	.0906 993	.0597 943	.0391 015
.37	.3093 940 ^e	.2144 280	.1463 872	.0987 493	.0659 705 ⁻	.0437 193
.38	.3234 560 ^e	.2269 861	.1569 339	.1072 261	.0725 627	.0487 153
.39	.3376 620 ^e	.2398 407	.1678 728	.1161 351	.0795 824	.0541 056
.40	.3520 000 ^e	.2529 822	.1792 000 ^e	.1254 792	.0870 400 ^e	.0599 062
.41	.3664 580 ^e	.2664 004	.1909 112	.1352 614	.0949 456	.0661 325
.42	.3810 240 ^e	.2800 847	.2030 011	.1454 840	.1033 083	.0727 990
.43	.3956 860 ^e	.2940 241	.2154 640	.1561 480	.1121 367	.0799 222
.44	.4104 320 ^e	.3082 073	.2282 931	.1672 538	.1214 383	.0875 144
.45	.4252 500 ^e	.3226 227	.2414 812	.1788 009	.1312 200 ^e	.0955 897
.46	.4401 280 ^e	.3372 581	.2550 203	.1907 876	.1414 876	.1041 608
.47	.4550 540 ^e	.3521 013	.2689 016	.2032 117	.1522 460	.1132 398
.48	.4700 160 ^e	.3671 393	.2831 155 ⁺	.2160 695 ⁻	.1634 902	.1228 178
.49	.4850 020 ^e	.3823 592	.2976 520	.2293 567	.1752 500 ⁻	.1329 651
.50	.5000 000 ^e	.3977 476	.3125 000 ^e	.2430 680	.1875 000 ^e	.1436 311
.51	.5149 980 ^e	.4132 905 ⁺	.3276 480	.2571 967	.2002 499	.1548 438
.52	.5299 840 ^e	.4289 741	.3430 835 ⁺	.2717 356	.2134 992	.1666 104
.53	.5449 460 ^e	.4447 838	.3587 936	.2866 759	.2272 459	.1789 307
.54	.5598 720 ^e	.4607 049	.3747 643	.3020 082	.2414 868	.1918 272
.55	.5747 500 ^e	.4767 225 ⁺	.3909 812	.3177 215 ⁺	.2562 175 ^e	.2052 851
.56	.5895 680 ^e	.4928 212	.4074 291	.3338 042	.2714 321	.2193 120
.57	.6043 140 ^e	.5089 853	.4240 920	.3502 432	.2871 232	.2339 079
.58	.6189 760 ^e	.5251 989	.4409 531	.3670 244	.3032 821	.2490 714
.59	.6335 420 ^e	.5414 459	.4579 952	.3841 325 ⁻	.3198 983	.2647 990
.60	.6480 000 ^e	.5577 096	.4752 000 ^e	.4015 509	.3369 600 ^e	.2810 856

TABLE I. THE $I_w(p, q)$ FUNCTION

45

 $p = .61$ to 1.00 $q = 2$ $p = 2$ to 4.5

p	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$	$p = 4.5$
$I(p, q)$	$1.0000\ 0007$	$1.142\ 8571$	$1.333\ 3333 \times \frac{1}{10}$	$1.6349\ 2063 \times \frac{1}{10}$	$1.5000\ 0000 \times \frac{1}{10}$	$1.4040\ 4040 \times \frac{1}{10}$
x						
.61	.6623 380 ^a	.5730 733	.4925 488	.4192 621	.3544 535 ⁺	.2979 243
.62	.6765 440 ^a	.5902 109	.5100 219	.4372 470	.3723 037	.3153 058
.63	.6906 060 ^a	.6064 320	.5275 902	.4554 856	.3906 734	.3332 189
.64	.7045 120 ^a	.6225 020 ^c	.5452 595 ⁺	.4739 564	.4093 041	.3516 504
.65	.7182 500 ^a	.6386 820	.5629 812	.4926 367	.4284 150 ^a	.3705 846
.66	.7318 080 ^a	.6546 838	.5807 419	.5115 027	.4478 038	.3900 033
.67	.7451 740 ^a	.6705 780	.5985 184	.5305 289	.4675 060	.4098 859
.68	.7583 360 ^a	.6863 487	.6162 867	.5496 890	.4874 954	.4302 094
.69	.7712 820 ^a	.7019 741	.6340 224	.5689 549	.5077 435 ⁺	.4509 480
.70	.7840 000 ^a	.7174 360	.6517 000 ^a	.5882 975 ⁻	.5282 200 ^a	.4720 729
.71	.7964 780 ^a	.7327 148	.6692 936	.6076 861	.5488 923	.4935 527
.72	.8087 040 ^a	.7477 909	.6867 763	.6270 886	.5697 257	.5153 528
.73	.8206 660 ^a	.7626 442	.7041 208	.6464 718	.5906 834	.5374 358
.74	.8323 520 ^a	.7772 545 ⁻	.7212 987	.6658 009	.6117 262	.5597 608
.75	.8437 500 ^a	.7916 013	.7382 812	.6850 396	.6328 125 ^a	.5822 837
.76	.8548 480 ^a	.8056 640	.7550 387	.7041 503	.6538 986	.6049 570
.77	.8656 340 ^a	.8194 215 ⁺	.7715 408	.7230 940	.6749 384	.6277 297
.78	.8760 960 ^a	.8328 527	.7877 563	.7418 300	.6958 831	.6505 472
.79	.8862 220 ^a	.8459 361	.8036 536	.7603 163	.7166 815 ⁻	.6733 510
.80	.8960 000 ^a	.8586 501	.8192 000 ^a	.7785 094	.7372 800 ^a	.6960 790
.81	.9054 180 ^a	.8709 727	.8343 624	.7963 643	.7576 223	.7186 650 ⁺
.82	.9144 640 ^a	.8828 819	.8491 067	.8138 345 ⁻	.7776 494	.7410 387
.83	.9231 260 ^a	.8943 553	.8633 984	.8308 718	.7972 998	.7631 258
.84	.9313 920 ^a	.9053 703	.8772 019	.8474 266	.8165 090	.7848 474
.85	.9392 500 ^a	.9159 041	.8904 812	.8634 478	.8352 100 ^a	.8061 205 ⁺
.86	.9466 880 ^a	.9259 337	.9031 995 ⁺	.8788 826	.8533 327	.8268 574
.87	.9536 940 ^a	.9354 358	.9153 192	.8936 766	.8708 044	.8469 659
.88	.9602 560 ^a	.9443 871	.9268 019	.9077 739	.8875 491	.8663 487
.89	.9663 620 ^a	.9527 637	.9376 088	.9211 170	.9034 883	.8849 041
.90	.9720 000 ^a	.9605 418	.9477 000 ^a	.9336 467	.9185 400 ^a	.9025 251
.91	.9771 580 ^a	.9676 974	.9570 352	.9453 021	.9326 195 ⁻	.9190 996
.92	.9818 240 ^a	.9742 060	.9655 731	.9560 209	.9456 387	.9345 104
.93	.9859 860 ^a	.9800 432	.9732 720	.9657 388	.9575 066	.9486 347
.94	.9896 320 ^a	.9851 843	.9800 891	.9743 901	.9681 287	.9613 445 ⁺
.95	.9927 500 ^a	.9896 042	.9859 812	.9819 073	.9774 075 ^a	.9725 061
.96	.9953 280 ^a	.9932 779	.9909 043	.9882 212	.9852 420	.9819 798
.97	.9973 540 ^a	.9961 800	.9948 136	.9932 609	.9915 279	.9896 205 ⁻
.98	.9988 160 ^a	.9982 849	.9976 635 ⁺	.9969 538	.9961 576	.9952 767
.99	.9997 020 ^a	.9995 669	.9994 080	.9992 256	.9990 199	.9987 911
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_w(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 2$

$B(p, q)$	$p = 2$	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$
x	$.1666\ 6667$	$.1142\ 8571$	$.8333\ 3333 \times \frac{1}{10}$	$.6349\ 2063 \times \frac{1}{10}$	$.5000\ 0000 \times \frac{1}{10}$
.61	.6623 380 ^e	.5730 733	.4925 488	.4192 621	.3544 535 ⁺
.62	.6705 440 ^e	.5902 109	.5100 219	.4372 470	.3723 637
.63	.6906 060 ^e	.6064 320	.5275 992	.4554 856	.3906 734
.64	.7045 120 ^e	.6225 920 ^e	.5452 595 ⁺	.4739 564	.4093 641
.65	.7182 500 ^e	.6386 820	.5620 812	.4926 367	.4284 150 ^e
.66	.7318 080 ^e	.6546 838	.5807 419	.5115 027	.4478 038
.67	.7451 740 ^e	.6705 789	.5985 184	.5305 289	.4675 060
.68	.7583 360 ^e	.6863 487	.6162 867	.5496 890	.4874 954
.69	.7712 820 ^e	.7019 741	.6340 224	.5689 549	.5077 435 ⁺
.70	.7840 000 ^e	.7174 360	.6517 000 ^e	.5882 975 ⁻	.5282 200 ^e
.71	.7964 780 ^e	.7327 148	.6692 936	.6076 861	.5488 923
.72	.8087 040 ^e	.7477 909	.6867 763	.6270 886	.5697 257
.73	.8206 660 ^e	.7626 442	.7041 208	.6464 718	.5906 834
.74	.8323 520 ^e	.7772 545 ⁻	.7212 987	.6658 009	.6117 262
.75	.8437 500 ^e	.7916 013	.7382 812	.6850 396	.6328 125 ^e
.76	.8548 480 ^e	.8056 040	.7550 387	.7041 503	.6538 986
.77	.8656 340 ^e	.8194 215 ⁺	.7715 408	.7230 940	.6749 384
.78	.8760 960 ^e	.8328 527	.7877 563	.7418 300	.6958 831
.79	.8862 220 ^e	.8459 361	.8036 536	.7603 163	.7166 815 ⁻
.80	.8960 000 ^e	.8586 501	.8192 000 ^e	.7785 094	.7372 800 ^e
.81	.9054 180 ^e	.8709 727	.8343 624	.7963 643	.7576 223
.82	.9144 640 ^e	.8828 819	.8491 067	.8138 345 ⁻	.7776 494
.83	.9231 260 ^e	.8943 553	.8633 984	.8308 718	.7972 998
.84	.9313 920 ^e	.9053 703	.8772 019	.8474 266	.8165 090
.85	.9392 500 ^e	.9159 041	.8904 812	.8634 478	.8352 100 ^e
.86	.9466 880 ^e	.9259 337	.9031 995 ⁺	.8788 826	.8533 327
.87	.9536 040 ^e	.9354 358	.9153 192	.8936 766	.8708 044
.88	.9602 560 ^e	.9443 871	.9268 019	.9077 739	.8875 491
.89	.9663 620 ^e	.9527 637	.9376 088	.9211 170	.9034 883
.90	.9720 000 ^e	.9605 418	.9477 000 ^e	.9336 467	.9185 400 ^e
.91	.9771 580 ^e	.9676 974	.9570 352	.9453 021	.9326 195 ⁻
.92	.9818 240 ^e	.9742 060	.9655 731	.9560 209	.9456 387
.93	.9859 860 ^e	.9800 432	.9732 720	.9657 388	.9575 066
.94	.9896 320 ^e	.9851 843	.9800 891	.9743 991	.9681 287
.95	.9927 500 ^e	.9896 042	.9859 812	.9819 073	.9774 075 ^e
.96	.9953 280 ^e	.9932 779	.9909 043	.9882 212	.9852 420
.97	.9973 540 ^e	.9961 800	.9948 136	.9932 609	.9915 279
.98	.9988 160 ^e	.9982 849	.9976 635 ⁺	.9969 538	.9961 576
.99	.9997 020 ^e	.9995 669	.9994 080	.9992 256	.9990 199
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$p = 5$ to

$q = 2$

03 to 60

	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$
$b, q) = .3333\ 3333 \times \frac{1}{10}$	$.2797\ 2028 \times \frac{1}{10}$	$.2380\ 9524 \times \frac{1}{10}$	$.2051\ 2821 \times \frac{1}{10}$	$.1785\ 7143 \times \frac{1}{10}$	$.1508\ 6275 \times \frac{1}{10}$	
x						
03	.0000 001	.0000 001	.0000 001	.0000 001	.0000 001	.0000 001
04	.0000 006	.0000 004	.0000 003	.0000 002	.0000 002	.0000 001
05	.0000 018	.0000 012	.0000 008	.0000 005 ⁺	.0000 004	.0000 002
06	.0000 044	.0000 027	.0000 017	.0000 011	.0000 007	.0000 005 ⁺
07	.0000 095 ⁻	.0000 056	.0000 034	.0000 022	.0000 014	.0000 009
08	.0000 184	.0000 106	.0000 064 ^e	.0000 040	.0000 026	.0000 017
09	.0000 328	.0000 188	.0000 112	.0000 070	.0000 044	.0000 029
10	.0000 550 ^e		.0000 188	.0000 116	.0000 074	.0000 049
11	.0000 878	.0000 315 ⁻	.0000 300	.0000 186	.0000 119	.0000 078
12	.0001 344	.0000 503	.0000 464	.0000 288	.0000 185 ⁻	.0000 122
13	.0001 986	.0001 153	.0000 695 ⁻	.0000 434	.0000 279	.0000 186
14	.0002 850 ⁺	.0001 669	.0001 013	.0000 636	.0000 413	.0000 276
15	.0003 987	.0002 357	.0001 443	.0000 913	.0000 590	.0000 401
16	.0005 453	.0003 258	.0002 014	.0001 285 ⁻	.0000 845 ⁻	.0000 572
17	.0007 312	.0004 417	.0002 757	.0001 775 ⁻	.0001 176	.0000 801
18	.0009 637	.0005 888	.0003 712 ^e	.0002 411	.0001 611	.0001 100
19	.0012 504	.0007 728	.0004 923	.0003 228	.0002 176	.0001 503 ⁺
20	.0016 000 ^e	.0010 004	.0006 440	.0004 263	.0002 899	.0002 022
21	.0020 216	.0012 787	.0008 320	.0005 561	.0003 815 ⁻	.0002 683
22	.0025 253	.0016 159	.0010 625 ⁺	.0007 172	.0004 964	.0003 519
23	.0031 216	.0020 207	.0013 428	.0009 152	.0006 391	.0004 500
24	.0038 221	.0025 024	.0016 805 ⁺	.0011 565 ⁺	.0008 150 ⁻	.0005 876
25	.0046 387	.0030 716	.0020 843	.0014 484	.0010 298	.0007 487
26	.0055 842	.0037 391	.0025 637	.0017 986	.0012 993	.0009 459
27	.0066 722	.0045 170	.0031 288	.0022 161	.0016 040	.0011 850
28	.0079 168	.0054 179	.0037 908 ^e	.0027 104	.0019 791	.0014 751
29	.0093 326	.0064 552	.0045 618	.0032 921	.0024 250 ⁻	.0018 223
30	.0109 350 ^e	.0076 432	.0054 546	.0039 728	.0029 518	.0022 302
31	.0127 400	.0089 971	.0064 832	.0047 651	.0035 708	.0027 271
32	.0147 640	.0105 326	.0076 622	.0056 824	.0042 944	.0033 959
33	.0170 239	.0122 663	.0090 075 ⁺	.0067 393	.0051 358	.0040 850
34	.0195 372	.0142 156	.0105 356	.0079 516	.0061 068	.0047 777
35	.0223 218	.0163 984	.0122 642	.0093 360	.0072 321	.0055 990
36	.0253 958	.0188 335 ⁻	.0142 116	.0109 104	.0085 197	.0067 104
37	.0287 777	.0215 401	.0163 973	.0126 930	.0099 909	.0079 943
38	.0324 864	.0245 382	.0188 410 ^e	.0147 059	.0116 653	.0094 002
39	.0365 408	.0278 483	.0215 655 ⁻	.0169 683	.0135 637	.0119 127
40	.0409 600 ^e	.0314 912	.0245 909	.0195 031	.0157 085 ⁻	.0128 466
41	.0457 632	.0354 883	.0279 404	.0223 337	.0181 230	.0143 821
42	.0509 696	.0398 614	.0316 375 ⁺	.0254 843	.0209 825	.0162 940
43	.0565 983	.0446 324	.0357 062		.0240 825	.0184 000
44	.0626 682	.0498 226			.0274 825	.0209 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 2$

	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$
$B(p, q)$	$3.333\ 3333 \times 10^{-1}$	$2.797\ 2028 \times 10^{-1}$	$2.380\ 9524 \times 10^{-1}$	$2.051\ 2821 \times 10^{-1}$	$1.785\ 7141 \times 10^{-1}$
λ					
.61	.2491 550	.2074 602	.1720 781	.1422 438	.1172 243
.62	.2656 785 ¹	.2220 014	.1863 048	.1551 942	.1288 911
.63	.2828 411	.2390 737	.2013 257	.1680 782	.1414 004
.64	.3006 477	.2559 801	.2171 535 ¹	.1836 184	.1548 112
.65	.3190 700	.2736 200	.2337 080	.1991 352	.1691 269
.66	.3381 208	.2910 937	.2512 680	.2155 463	.1843 844
.67	.3577 832	.3110 927	.2695 660	.2328 664	.2006 096
.68	.3780 227	.3309 086	.2886 930	.2511 069	.2178 248
.69	.3988 350	.3514 287	.3086 450	.2702 753	.2360 494
.70	.4201 750 ^e	.3726 362	.3294 172 ^e	.2903 750 ⁺	.2552 983
.71	.4420 362	.3945 102	.3509 948	.3114 046	.2755 821
.72	.4643 802	.4170 253	.3733 617	.3333 576	.2969 061
.73	.4871 718	.4401 514	.3964 957	.3562 216	.3192 698
.74	.5103 715 ¹	.4638 534	.4203 686	.3799 780	.3426 661
.75	.5340 355 ¹	.4880 907	.4449 463	.4046 015 ⁺	.3670 807
.76	.5578 136	.5128 174	.4701 878	.4300 593	.3924 912
.77	.5819 586	.5379 813	.4960 453	.4563 193	.4188 665 ⁻
.78	.6063 666	.5635 242	.5224 631	.4833 949	.4461 654
.79	.6307 066	.5893 812	.5493 776	.5109 839	.4743 366
.80	.6553 600 ^e	.6154 804	.5767 168 ^e	.5392 781	.5033 165 ⁻
.81	.6799 230	.6417 427	.6043 902	.5681 070	.5330 293
.82	.7044 957	.6680 812	.6323 339	.5973 788	.5633 852
.83	.7287 225 ¹	.6944 012	.6604 196	.6269 887	.5942 795 ⁺
.84	.7527 815 ⁻	.7205 991	.6885 441	.6568 187	.6255 915 ⁺
.85	.7764 843	.7465 630	.7165 841	.6867 365 ⁻	.6571 830
.86	.7997 259	.7721 732	.7444 037	.7165 912	.6888 971
.87	.8223 045 ¹	.7972 968	.7718 546	.7462 280	.7205 567
.88	.8443 711	.8217 937	.7987 750 ⁺	.7754 564	.7519 631
.89	.8655 202	.8455 126	.8240 880	.8040 798	.7828 946
.90	.8857 350 ^e	.8662 914	.8503 051 ^e	.8318 792	.8131 047
.91	.9048 466	.8899 566	.8745 186	.8586 147	.8423 205 ⁻
.92	.9227 141	.9103 231	.8974 054	.8840 248	.8702 407
.93	.9391 793	.9291 931	.9187 261	.9078 250 ⁺	.8965 343
.94	.9549 752	.9463 566	.9382 220	.9297 065 ⁻	.9208 382
.95	.9672 262	.9615 902	.9556 195 ⁻	.9493 346	.9427 553
.96	.9784 472	.9746 566	.9706 107	.9663 480	.9618 528
.97	.9875 441	.9853 045 ⁻	.9829 070	.9803 568	.9776 592
.98	.9943 129	.9921 435 ⁻	.9921 435 ⁻	.9909 413	.9896 631
.99	.9985 306	.9982 654	.9979 600	.9976 504	.9973 099
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$\cdot 10$ to $\cdot 70$

$q = 2$

$p = 8$ to

	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$
$p, q) = \cdot 1388\ 8889 \times \frac{1}{10}$	$\cdot 1238\ 3901 \times \frac{1}{10}$	$\cdot 1111\ 1111 \times \frac{1}{10}$	$\cdot 1002\ 5063 \times \frac{1}{10}$	$\cdot 9090\ 9091 \times \frac{1}{10}$	$\cdot 8281\ 5735 \times \frac{1}{10}$	
$\cdot 10$	$\cdot 0000\ 001$					
$\cdot 11$	$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 12$	$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 13$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 14$	$\cdot 0000\ 012$	$\cdot 0000\ 005$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 15$	$\cdot 0000\ 020$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 16$	$\cdot 0000\ 033$	$\cdot 0000\ 014$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 17$	$\cdot 0000\ 053$	$\cdot 0000\ 023$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 18$	$\cdot 0000\ 083$	$\cdot 0000\ 037$	$\cdot 0000\ 017$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 19$	$\cdot 0000\ 127$	$\cdot 0000\ 058$	$\cdot 0000\ 027$	$\cdot 0000\ 012$	$\cdot 0000\ 006$	$\cdot 0000\ 003$
$\cdot 20$	$\cdot 0000\ 189$	$\cdot 0000\ 089$	$\cdot 0000\ 042$	$\cdot 0000\ 020$	$\cdot 0000\ 009$	$\cdot 0000\ 004$
$\cdot 21$	$\cdot 0000\ 277$	$\cdot 0000\ 134$	$\cdot 0000\ 064$	$\cdot 0000\ 031$	$\cdot 0000\ 015$	$\cdot 0000\ 007$
$\cdot 22$	$\cdot 0000\ 397$	$\cdot 0000\ 196$	$\cdot 0000\ 097$	$\cdot 0000\ 048$	$\cdot 0000\ 023$	$\cdot 0000\ 011$
$\cdot 23$	$\cdot 0000\ 561$	$\cdot 0000\ 283$	$\cdot 0000\ 143$	$\cdot 0000\ 072$	$\cdot 0000\ 036$	$\cdot 0000\ 018$
$\cdot 24$	$\cdot 0000\ 779$	$\cdot 0000\ 402$	$\cdot 0000\ 207$	$\cdot 0000\ 106$	$\cdot 0000\ 055$	$\cdot 0000\ 028$
$\cdot 25$	$\cdot 0001\ 068$	$\cdot 0000\ 563$	$\cdot 0000\ 296$	$\cdot 0000\ 155$	$\cdot 0000\ 081$	$\cdot 0000\ 042$
$\cdot 26$	$\cdot 0001\ 445^+$	$\cdot 0000\ 776$	$\cdot 0000\ 416$	$\cdot 0000\ 222$	$\cdot 0000\ 119$	$\cdot 0000\ 063$
$\cdot 27$	$\cdot 0001\ 932$	$\cdot 0001\ 057$	$\cdot 0000\ 577$	$\cdot 0000\ 314$	$\cdot 0000\ 171$	$\cdot 0000\ 093$
$\cdot 28$	$\cdot 0002\ 554$	$\cdot 0001\ 423$	$\cdot 0000\ 791$	$\cdot 0000\ 439$	$\cdot 0000\ 243$	$\cdot 0000\ 134$
$\cdot 29$	$\cdot 0003\ 342$	$\cdot 0001\ 895^+$	$\cdot 0001\ 072$	$\cdot 0000\ 605^+$	$\cdot 0000\ 341$	$\cdot 0000\ 192$
$\cdot 30$	$\cdot 0004\ 330$	$\cdot 0002\ 498$	$\cdot 0001\ 437$	$\cdot 0000\ 825$	$\cdot 0000\ 472$	$\cdot 0000\ 270$
$\cdot 31$	$\cdot 0005\ 561$	$\cdot 0003\ 260$	$\cdot 0001\ 906$	$\cdot 0001\ 112$	$\cdot 0000\ 648$	$\cdot 0000\ 376$
$\cdot 32$	$\cdot 0007\ 081$	$\cdot 0004\ 217$	$\cdot 0002\ 505^+$	$\cdot 0001\ 485$	$\cdot 0000\ 878$	$\cdot 0000\ 518$
$\cdot 33$	$\cdot 0008\ 945$	$\cdot 0005\ 409$	$\cdot 0003\ 263$	$\cdot 0001\ 964$	$\cdot 0001\ 179$	$\cdot 0000\ 707$
$\cdot 34$	$\cdot 0011\ 215$	$\cdot 0006\ 883$	$\cdot 0004\ 214$	$\cdot 0002\ 574$	$\cdot 0001\ 569$	$\cdot 0000\ 955$
$\cdot 35$	$\cdot 0013\ 962$	$\cdot 0008\ 693$	$\cdot 0005\ 399$	$\cdot 0003\ 346$	$\cdot 0002\ 069$	$\cdot 0001\ 277$
$\cdot 36$	$\cdot 0017\ 265^+$	$\cdot 0010\ 901$	$\cdot 0006\ 865^+$	$\cdot 0004\ 314$	$\cdot 0002\ 706$	$\cdot 0001\ 694$
$\cdot 37$	$\cdot 0021\ 215^+$	$\cdot 0013\ 578$	$\cdot 0008\ 668$	$\cdot 0005\ 522$	$\cdot 0003\ 510$	$\cdot 0002\ 227$
$\cdot 38$	$\cdot 0025\ 913$	$\cdot 0016\ 805$	$\cdot 0010\ 871$	$\cdot 0007\ 017$	$\cdot 0004\ 520$	$\cdot 0002\ 906$
$\cdot 39$	$\cdot 0031\ 470$	$\cdot 0020\ 672$	$\cdot 0013\ 546$	$\cdot 0008\ 857$	$\cdot 0005\ 780$	$\cdot 0003\ 764$
$\cdot 40$	$\cdot 0038\ 011$	$\cdot 0025\ 284$	$\cdot 0016\ 777$	$\cdot 0011\ 108$	$\cdot 0007\ 340$	$\cdot 0004\ 841$
$\cdot 41$	$\cdot 0045\ 674$	$\cdot 0030\ 754$	$\cdot 0020\ 658$	$\cdot 0013\ 846$	$\cdot 0009\ 262$	$\cdot 0006\ 184$
$\cdot 42$	$\cdot 0054\ 610$	$\cdot 0037\ 211$	$\cdot 0025\ 295$	$\cdot 0017\ 157$	$\cdot 0011\ 615$	$\cdot 0007\ 848$
$\cdot 43$	$\cdot 0064\ 986$	$\cdot 0044\ 799$	$\cdot 0030\ 809$	$\cdot 0021\ 142$	$\cdot 0014\ 480$	$\cdot 0009\ 809$
$\cdot 44$	$\cdot 0076\ 984$	$\cdot 0053\ 675$	$\cdot 0037\ 335$	$\cdot 0025\ 913$	$\cdot 0017\ 950^+$	$\cdot 0012\ 412$
$\cdot 45$	$\cdot 0090\ 802$	$\cdot 0064\ 014$	$\cdot 0045\ 022$	$\cdot 0031\ 598$	$\cdot 0022\ 133$	$\cdot 0015\ 475$
$\cdot 46$	$\cdot 0106\ 653$	$\cdot 0076\ 007$	$\cdot 0054\ 040$	$\cdot 0038\ 341$	$\cdot 0027\ 149$	$\cdot 0019\ 190$
$\cdot 47$	$\cdot 0124\ 771$	$\cdot 0089\ 865$	$\cdot 0064\ 574$	$\cdot 0046\ 303$	$\cdot 0033\ 137$	$\cdot 0023\ 673$
$\cdot 48$	$\cdot 0145\ 405^+$	$\cdot 0105\ 816$	$\cdot 0076\ 828$	$\cdot 0055\ 664$	$\cdot 0040\ 254$	$\cdot 0029\ 058$
$\cdot 49$	$\cdot 0168\ 823$	$\cdot 0124\ 108$	$\cdot 0091\ 028$	$\cdot 0066\ 627$	$\cdot 0048\ 673$	$\cdot 0035\ 496$
$\cdot 50$	$\cdot 0195\ 312$	$\cdot 0145\ 012$	$\cdot 0107\ 422$	$\cdot 0079\ 411$	$\cdot 0058\ 594$	$\cdot 0043\ 158$
$\cdot 51$	$\cdot 0225\ 178$	$\cdot 0168\ 817$	$\cdot 0126\ 278$	$\cdot 0094\ 265$		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to 1.00 $q = 2$

	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$B(p, q) = .1388\ 8889 \times \frac{x}{10}$	$.1238\ 3901 \times \frac{x}{10}$	$.1111\ 1111 \times \frac{x}{10}$	$.1002\ 5063 \times \frac{x}{10}$	$.9090\ 9091 \times \frac{x}{10}$	
x					
.71	.2143 902	.1885 381	.1655 131	.1450 655 ⁺	.1269 5
.72	.2339 941	.2071 300	.1830 354	.1614 878	.1422 6
.73	.2548 414	.2270 386	.2019 295 ⁺	.1793 192	.1590 1
.74	.2769 520	.2482 988	.2222 450 ⁻	.1986 236	.1772 6
.75	.3003 387	.2709 385 ⁺	.2440 252	.2194 602	.1970 9
.76	.3250 062	.2949 777	.2673 064	.2418 817	.2185 8
.77	.3509 491	.3204 267	.2921 157	.2659 324	.2417 8
.78	.3781 516	.3472 850 ⁻	.3184 694	.2916 468	.2667 4
.79	.4065 852	.3755 394	.3463 711	.3190 467	.2935 1
.80	.4362 076	.4051 620	.3758 096	.3481 392	.3221 2
.81	.4669 611	.4361 083	.4067 565 ⁻	.3789 139	.3525 7
.82	.4987 704	.4683 152	.4391 632	.4113 399	.3848 5
.83	.5315 410	.5016 983	.4729 588	.4453 624	.4189 3
.84	.5651 570	.5361 495 ⁺	.5080 464	.4808 989	.4547 4
.85	.5994 792	.5715 343	.5442 998	.5178 352	.4921 8
.86	.6343 420	.6076 884	.5815 600	.5560 210	.5311 2
.87	.6695 518	.6444 152	.6196 308	.5952 651	.5713 7
.88	.7048 837	.6814 815 ⁺	.6582 750 ⁺	.6353 297	.6127 0
.89	.7400 787	.7186 146	.6972 092	.6759 248	.6548 1
.90	.7748 410	.7554 975 ⁺	.7360 989	.7167 017	.6973 5
.91	.8088 343	.7917 654	.7745 529	.7572 463	.7398 9
.92	.8416 790	.8270 006	.8121 175 ⁺	.7970 710	.7818 9
.93	.8729 476	.8607 276	.8482 701	.8356 073	.8227 6
.94	.9021 620	.8926 085 ⁺	.8824 120	.8721 963	.8617 8
.95	.9287 886	.9214 367	.9138 616	.9060 794	.8981 0
.96	.9522 342	.9471 315 ⁻	.9418 462	.9363 879	.9307 6
.97	.9718 418	.9687 316	.9654 934	.9621 319	.9586 5
.98	.9868 851	.9853 885 ⁺	.9838 224	.9821 881	.9804 8
.99	.9965 643	.9961 595 ⁺	.9957 338	.9952 873	.9948 2
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$p = 11$ to 16

80

$q = 2$

$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$
$\cdot 7575\ 7576 \times \frac{1}{10^8}$	$\cdot 6410\ 2564 \times \frac{1}{10^8}$	$\cdot 5494\ 5055 \times \frac{1}{10^8}$	$\cdot 4761\ 9048 \times \frac{1}{10^8}$	$\cdot 4166\ 6667 \times \frac{1}{10^8}$	$\cdot 3676\ 4706 \times \frac{1}{10^8}$
$\cdot 0000\ 001$					
$\cdot 0000\ 001$					
$\cdot 0000\ 002$					
$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 0000\ 006$	$\cdot 0000\ 001$				
$\cdot 0000\ 009$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 014$	$\cdot 0000\ 004$	$\cdot 0000\ 001$			
$\cdot 0000\ 022$	$\cdot 0000\ 006$	$\cdot 0000\ 002$			
$\cdot 0000\ 034$	$\cdot 0000\ 009$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 0000\ 050^+$	$\cdot 0000\ 015^-$	$\cdot 0000\ 004$	$\cdot 0000\ 001$		
$\cdot 0000\ 074$	$\cdot 0000\ 022$	$\cdot 0000\ 007$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 107$	$\cdot 0000\ 034$	$\cdot 0000\ 010$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 0000\ 154$	$\cdot 0000\ 050^-$	$\cdot 0000\ 016$	$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 218$	$\cdot 0000\ 073$	$\cdot 0000\ 024$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 0000\ 306$	$\cdot 0000\ 106$	$\cdot 0000\ 036$	$\cdot 0000\ 012$	$\cdot 0000\ 004$	$\cdot 0000\ 001$
$\cdot 0000\ 423$	$\cdot 0000\ 151$	$\cdot 0000\ 053$	$\cdot 0000\ 019$	$\cdot 0000\ 007$	$\cdot 0000\ 002$
$\cdot 0000\ 580$	$\cdot 0000\ 213$	$\cdot 0000\ 078$	$\cdot 0000\ 028$	$\cdot 0000\ 010$	$\cdot 0000\ 004$
$\cdot 0000\ 787$	$\cdot 0000\ 297$	$\cdot 0000\ 112$	$\cdot 0000\ 042$	$\cdot 0000\ 016$	$\cdot 0000\ 006$
$\cdot 0001\ 058$	$\cdot 0000\ 411$	$\cdot 0000\ 159$	$\cdot 0000\ 061$	$\cdot 0000\ 023$	$\cdot 0000\ 009$
$\cdot 0001\ 411$	$\cdot 0000\ 564$	$\cdot 0000\ 224$	$\cdot 0000\ 088$	$\cdot 0000\ 035^-$	$\cdot 0000\ 014$
$\cdot 0001\ 866$	$\cdot 0000\ 765^+$	$\cdot 0000\ 312$	$\cdot 0000\ 127$	$\cdot 0000\ 051$	$\cdot 0000\ 021$
$\cdot 0002\ 448$	$\cdot 0001\ 030$	$\cdot 0000\ 431$	$\cdot 0000\ 180$	$\cdot 0000\ 075^-$	$\cdot 0000\ 031$
$\cdot 0003\ 188$	$\cdot 0001\ 376$	$\cdot 0000\ 591$	$\cdot 0000\ 252$	$\cdot 0000\ 107$	$\cdot 0000\ 046$
$\cdot 0004\ 122$	$\cdot 0001\ 823$	$\cdot 0000\ 802$	$\cdot 0000\ 351$	$\cdot 0000\ 153$	$\cdot 0000\ 067$
$\cdot 0005\ 294$	$\cdot 0002\ 398$	$\cdot 0001\ 081$	$\cdot 0000\ 485^-$	$\cdot 0000\ 217$	$\cdot 0000\ 096$
$\cdot 0006\ 756$	$\cdot 0003\ 133$	$\cdot 0001\ 445^+$	$\cdot 0000\ 663$	$\cdot 0000\ 303$	$\cdot 0000\ 138$
$\cdot 0008\ 568$	$\cdot 0004\ 065^-$	$\cdot 0001\ 918$	$\cdot 0000\ 901$	$\cdot 0000\ 422$	$\cdot 0000\ 197$
$\cdot 0010\ 803$	$\cdot 0005\ 240$	$\cdot 0002\ 529$	$\cdot 0001\ 215^-$	$\cdot 0000\ 581$	$\cdot 0000\ 277$
$\cdot 0013\ 542$	$\cdot 0006\ 714$	$\cdot 0003\ 312$	$\cdot 0001\ 626$	$\cdot 0000\ 795^+$	$\cdot 0000\ 387$
$\cdot 0016\ 885^-$	$\cdot 0008\ 552$	$\cdot 0004\ 309$	$\cdot 0002\ 161$	$\cdot 0001\ 080$	$\cdot 0000\ 537$
$\cdot 0020\ 942$	$\cdot 0010\ 830$	$\cdot 0005\ 572$	$\cdot 0002\ 854$	$\cdot 0001\ 456$	$\cdot 0000\ 740$
$\cdot 0025\ 844$	$\cdot 0013\ 641$	$\cdot 0007\ 163$	$\cdot 0003\ 744$	$\cdot 0001\ 950^-$	$\cdot 0001\ 012$
$\cdot 0031\ 738$	$\cdot 0017\ 090$	$\cdot 0009\ 155^+$	$\cdot 0004\ 883$	$\cdot 0002\ 594$	$\cdot 0001\ 373$
$\cdot 0038\ 795^-$	$\cdot 0021\ 302$	$\cdot 0011\ 638$	$\cdot 0006\ 330$	$\cdot 0003\ 430$	$\cdot 0001\ 852$
$\cdot 0047\ 206$	$\cdot 0026\ 423$	$\cdot 0014\ 716$	$\cdot 0008\ 160$	$\cdot 0004\ 507$	$\cdot 0002\ 481$
$\cdot 0057\ 190$	$\cdot 0032\ 620$	$\cdot 0018\ 512$	$\cdot 0010\ 460$	$\cdot 0005\ 888$	$\cdot 0003\ 303$
$\cdot 0068\ 993$	$\cdot 0040\ 084$	$\cdot 0023\ 173$	$\cdot 0013\ 338$	$\cdot 0007\ 648$	$\cdot 0004\ 370$
$\cdot 0082\ 891$	$\cdot 0049\ 038$	$\cdot 0028\ 867$	$\cdot 0016\ 920$	$\cdot 0009\ 880$	$\cdot 0005\ 749$
$\cdot 0099\ 193$	$\cdot 0059\ 733$	$\cdot 0035\ 794$	$\cdot 0021\ 357$	$\cdot 0012\ 695^+$	$\cdot 0007\ 521$
$\cdot 0118\ 244$	$\cdot 0072\ 457$	$\cdot 0044\ 183$	$\cdot 0026\ 828$	$\cdot 0016\ 229$	$\cdot 0009\ 784$
$\cdot 0140\ 425^-$	$\cdot 0087\ 533$	$\cdot 0054\ 300$	$\cdot 0033\ 541$	$\cdot 0020\ 642$	$\cdot 0012\ 661$
$\cdot 0166\ 159$	$\cdot 0105\ 328$	$\cdot 0066\ 448$	$\cdot 0041\ 743$	$\cdot 0026\ 127$	$\cdot 0016\ 299$
$\cdot 0195\ 010$	$\cdot 0126\ 253$	$\cdot 0080\ 976$	$\cdot 0051\ 720$	$\cdot 0032\ 913$	$\cdot 0020\ 876$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to 1.00 $q = 2$

	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .7575\ 7576 \times \frac{x}{10^8}$		$.6410\ 2564 \times \frac{x}{10^8}$	$.5494\ 5055 \times \frac{x}{10^8}$	$.4761\ 9048 \times \frac{x}{10^8}$	$.4166\ 6667 \times \frac{x}{10^8}$
x					
.81	.3042 942	.2616 339	.2241 995 ⁺	.1915 452	.1632 060
.82	.3358 680	.2920 474	.2531 200	.2187 442	.1885 426
.83	.3696 076	.3249 456	.2847 870	.2488 915 ⁻	.2169 700
.84	.4054 910	.3603 581	.3192 871	.2821 337	.2486 957
.85	.4434 596	.3982 769	.3566 712	.3185 860	.2839 012
.86	.4834 112	.4386 481	.3969 438	.3583 192	.3227 293
.87	.5251 919	.4813 611	.4400 505 ⁺	.4013 457	.3652 673
.88	.5685 876	.5262 376	.4858 640	.4476 022	.4115 268
.89	.6133 132	.5730 177	.5341 661	.4969 284	.4614 195 ⁺
.90	.6590 023	.6213 450 ⁻	.5846 291	.5490 430	.5147 278
.91	.7051 936	.6707 490	.6367 923	.6035 148	.5710 692
.92	.7513 183	.7206 261	.6900 363	.6597 288	.6298 543
.93	.7966 833	.7702 172	.7435 526	.7168 470	.6902 368
.94	.8404 550 ⁺	.8185 829	.7963 099	.7737 627	.7510 544
.95	.8816 401	.8645 761	.8470 144	.8290 475 ⁻	.8107 597
.96	.9190 646	.9068 104	.8940 661	.8808 904	.8673 382
.97	.9513 509	.9436 256	.9355 077	.9270 275 ⁺	.9182 142
.98	.9768 922	.9730 487	.9689 682	.9646 617	.9601 398
.99	.9938 255 ⁻	.9927 511	.9915 988	.9903 702	.9890 671
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

00

$q = 2$

$p = 17$ to 22

$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$\cdot 3267\ 9739 \times \frac{1}{10^8}$	$\cdot 2923\ 9766 \times \frac{1}{10^8}$	$\cdot 2631\ 5789 \times \frac{1}{10^8}$	$\cdot 2380\ 9524 \times \frac{1}{10^8}$	$\cdot 2164\ 5022 \times \frac{1}{10^8}$	$\cdot 1976\ 2846 \times \frac{1}{10^8}$
$\cdot 0000\ 001$					
$\cdot 0000\ 001$					
$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$		
$\cdot 0000\ 013$	$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 019$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 029$	$\cdot 0000\ 012$	$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 043$	$\cdot 0000\ 019$	$\cdot 0000\ 008$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 063$	$\cdot 0000\ 028$	$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 0000\ 091$	$\cdot 0000\ 042$	$\cdot 0000\ 020$	$\cdot 0000\ 009$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 132$	$\cdot 0000\ 062$	$\cdot 0000\ 030$	$\cdot 0000\ 014$	$\cdot 0000\ 007$	$\cdot 0000\ 003$
$\cdot 0000\ 188$	$\cdot 0000\ 091$	$\cdot 0000\ 044$	$\cdot 0000\ 021$	$\cdot 0000\ 010$	$\cdot 0000\ 005^-$
$\cdot 0000\ 267$	$\cdot 0000\ 132$	$\cdot 0000\ 065^+$	$\cdot 0000\ 032$	$\cdot 0000\ 016$	$\cdot 0000\ 008$
$\cdot 0000\ 375^+$	$\cdot 0000\ 190$	$\cdot 0000\ 096$	$\cdot 0000\ 048$	$\cdot 0000\ 024$	$\cdot 0000\ 012$
$\cdot 0000\ 523$	$\cdot 0000\ 270$	$\cdot 0000\ 139$	$\cdot 0000\ 071$	$\cdot 0000\ 037$	$\cdot 0000\ 019$
$\cdot 0000\ 725^-$	$\cdot 0000\ 381$	$\cdot 0000\ 200$	$\cdot 0000\ 105^-$	$\cdot 0000\ 055^-$	$\cdot 0000\ 029$
$\cdot 0000\ 997$	$\cdot 0000\ 535^+$	$\cdot 0000\ 286$	$\cdot 0000\ 153$	$\cdot 0000\ 082$	$\cdot 0000\ 043$
$\cdot 0001\ 361$	$\cdot 0000\ 745^-$	$\cdot 0000\ 407$	$\cdot 0000\ 222$	$\cdot 0000\ 120$	$\cdot 0000\ 065^+$
$\cdot 0001\ 847$	$\cdot 0001\ 030$	$\cdot 0000\ 573$	$\cdot 0000\ 318$	$\cdot 0000\ 176$	$\cdot 0000\ 097$
$\cdot 0002\ 490$	$\cdot 0001\ 415^-$	$\cdot 0000\ 802$	$\cdot 0000\ 453$	$\cdot 0000\ 256$	$\cdot 0000\ 144$
$\cdot 0003\ 336$	$\cdot 0001\ 930$	$\cdot 0001\ 114$	$\cdot 0000\ 642$	$\cdot 0000\ 369$	$\cdot 0000\ 212$
$\cdot 0004\ 442$	$\cdot 0002\ 617$	$\cdot 0001\ 538$	$\cdot 0000\ 902$	$\cdot 0000\ 528$	$\cdot 0000\ 308$
$\cdot 0005\ 881$	$\cdot 0003\ 526$	$\cdot 0002\ 109$	$\cdot 0001\ 258$	$\cdot 0000\ 749$	$\cdot 0000\ 445^+$
$\cdot 0007\ 743$	$\cdot 0004\ 723$	$\cdot 0002\ 873$	$\cdot 0001\ 745^-$	$\cdot 0001\ 057$	$\cdot 0000\ 639$
$\cdot 0010\ 138$	$\cdot 0006\ 289$	$\cdot 0003\ 892$	$\cdot 0002\ 403$	$\cdot 0001\ 481$	$\cdot 0000\ 911$
$\cdot 0013\ 203$	$\cdot 0008\ 328$	$\cdot 0005\ 240$	$\cdot 0003\ 291$	$\cdot 0002\ 062$	$\cdot 0001\ 290$
$\cdot 0017\ 105^+$	$\cdot 0010\ 968$	$\cdot 0007\ 016$	$\cdot 0004\ 478$	$\cdot 0002\ 853$	$\cdot 0001\ 814$
$\cdot 0022\ 049$	$\cdot 0014\ 367$	$\cdot 0009\ 339$	$\cdot 0006\ 058$	$\cdot 0003\ 922$	$\cdot 0002\ 535^-$
$\cdot 0028\ 282$	$\cdot 0018\ 722$	$\cdot 0012\ 365^-$	$\cdot 0008\ 149$	$\cdot 0005\ 360$	$\cdot 0003\ 519$
$\cdot 0036\ 103$	$\cdot 0024\ 274$	$\cdot 0016\ 283$	$\cdot 0010\ 900$	$\cdot 0007\ 282$	$\cdot 0004\ 857$
$\cdot 0045\ 868$	$\cdot 0031\ 316$	$\cdot 0021\ 331$	$\cdot 0014\ 500^-$	$\cdot 0009\ 837$	$\cdot 0006\ 662$
$\cdot 0058\ 006$	$\cdot 0040\ 204$	$\cdot 0027\ 802$	$\cdot 0019\ 186$	$\cdot 0013\ 214$	$\cdot 0009\ 086$
$\cdot 0073\ 025^+$	$\cdot 0051\ 370$	$\cdot 0036\ 054$	$\cdot 0025\ 253$	$\cdot 0017\ 654$	$\cdot 0012\ 320$
$\cdot 0091\ 525^-$	$\cdot 0065\ 329$	$\cdot 0046\ 527$	$\cdot 0033\ 068$	$\cdot 0023\ 459$	$\cdot 0016\ 613$
$\cdot 0114\ 209$	$\cdot 0082\ 701$	$\cdot 0059\ 752$	$\cdot 0043\ 084$	$\cdot 0031\ 008$	$\cdot 0022\ 279$
$\cdot 0141\ 905^-$	$\cdot 0104\ 218$	$\cdot 0076\ 373$	$\cdot 0055\ 855^-$	$\cdot 0040\ 774$	$\cdot 0029\ 715^-$
$\cdot 0175\ 569$	$\cdot 0130\ 750^-$	$\cdot 0097\ 160$	$\cdot 0072\ 057$	$\cdot 0053\ 342$	$\cdot 0039\ 422$
$\cdot 0216\ 309$	$\cdot 0163\ 313$	$\cdot 0123\ 037$	$\cdot 0092\ 511$	$\cdot 0069\ 434$	$\cdot 0052\ 027$
$\cdot 0265\ 400$	$\cdot 0203\ 100$	$\cdot 0155\ 094$	$\cdot 0118\ 205^+$	$\cdot 0089\ 930$	$\cdot 0068\ 307$
$\cdot 0324\ 294$	$\cdot 0251\ 489$	$\cdot 0194\ 621$	$\cdot 0150\ 323$	$\cdot 0115\ 004$	$\cdot 0089\ 221$
$\cdot 0394\ 640$	$\cdot 0310\ 074$	$\cdot 0243\ 126$	$\cdot 0190\ 273$	$\cdot 0148\ 651$	$\cdot 0115\ 947$
	$\cdot 0280\ 677$	$\cdot 0292\ 266$	$\cdot 0230\ 718$	$\cdot 0189\ 724$	$\cdot 0149\ 920$

TABLE I. THE $I_w(p, q)$ FUNCTION

3 to 1.00		$q = 2$		$p =$	
$p = 23$		$p = 24$		$p = 25$	
$p = 26$		$p = 27$		$p = 28$	
$q) = .1811\ 5942 \times \frac{1}{10^2}$					
$.1666\ 6667 \times \frac{1}{10^2}$					
$.1538\ 4615 \times \frac{1}{10^2}$					
$.1424\ 5014 \times \frac{1}{10^2}$					
$.1322\ 7513 \times \frac{1}{10^2}$					
$.1231\ 5789 \times \frac{1}{10^2}$					
$.1140\ 4000 \times \frac{1}{10^2}$					
$.1049\ 2290 \times \frac{1}{10^2}$					
$.0958\ 0581 \times \frac{1}{10^2}$					
$.0867\ 8872 \times \frac{1}{10^2}$					
$.0777\ 7163 \times \frac{1}{10^2}$					
$.0687\ 5454 \times \frac{1}{10^2}$					
$.0597\ 3745 \times \frac{1}{10^2}$					
$.0507\ 2036 \times \frac{1}{10^2}$					
$.0417\ 0327 \times \frac{1}{10^2}$					
$.0326\ 8618 \times \frac{1}{10^2}$					
$.0236\ 6909 \times \frac{1}{10^2}$					
$.0146\ 5200 \times \frac{1}{10^2}$					
$.0056\ 3491 \times \frac{1}{10^2}$					
$.0000\ 1782 \times \frac{1}{10^2}$					
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$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.0000\ 0000 \times \frac{1}{10^2}$					
$.$					

	$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$
$q = .1149\ 4253 \times \frac{1}{100}$	$.1075\ 2688 \times \frac{1}{100}$	$.1008\ 0645 \times \frac{1}{100}$	$.9469\ 6970 \times \frac{1}{100}$	$.8912\ 6560 \times \frac{1}{100}$	$.8403\ 3613$	
52	.0000 001					
53	.0000 001	.0000 001				
54	.0000 002	.0000 001	.0000 001			
55	.0000 004	.0000 002	.0000 001	.0000 001		
56	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001	
57	.0000 011	.0000 007	.0000 004	.0000 002	.0000 001	
58	.0000 018	.0000 011	.0000 006	.0000 004	.0000 002	
59	.0000 029	.0000 018	.0000 011	.0000 007	.0000 004	
60	.0000 046	.0000 029	.0000 018	.0000 011	.0000 007	
61	.0000 073	.0000 046	.0000 029	.0000 018	.0000 011	
62	.0000 115-	.0000 073	.0000 047	.0000 030	.0000 012	
63	.0000 178	.0000 116	.0000 075+	.0000 049	.0000 019	
64	.0000 274	.0000 181	.0000 119	.0000 079	.0000 052	
65	.0000 419	.0000 281	.0000 188	.0000 126	.0000 084	
66	.0000 635-	.0000 432	.0000 294	.0000 200	.0000 136	
67	.0000 956	.0000 660	.0000 456	.0000 314	.0000 217	
68	.0001 428	.0001 001	.0000 701	.0000 491	.0000 343	
69	.0002 119	.0001 508	.0001 072	.0000 761	.0000 540	
70	.0003 123	.0002 254	.0001 625+	.0001 171	.0000 843	
71	.0004 572	.0003 346	.0002 447	.0001 788	.0001 305-	
72	.0006 647	.0004 933	.0003 657	.0002 710	.0002 006	
73	.0009 601	.0007 223	.0005 429	.0004 078	.0003 060	
74	.0013 778	.0010 506	.0008 004	.0006 093	.0004 635-	
75	.0019 644	.0015 179	.0011 719	.0009 041	.0006 969	
76	.0027 830	.0021 788	.0017 044	.0013 322	.0010 404	
77	.0039 177	.0031 071	.0024 621	.0019 494	.0015 424	
78	.0054 802	.0044 020	.0035 330	.0028 332	.0022 704	
79	.0076 178	.0061 963	.0050 359	.0040 896	.0033 187	
80	.0105 225-	.0086 656	.0071 305+	.0058 629	.0048 171	
81	.0144 426	.0120 400	.0100 289	.0083 475-	.0069 429	
82	.0196 966	.0166 186	.0140 106	.0118 029	.0099 361	
83	.0266 882	.0227 862	.0194 396	.0165 724	.0141 182	
84	.0359 235-	.0310 318	.0267 858	.0231 041	.0199 148	
85	.0480 289	.0419 692	.0366 467	.0319 767	.0278 831	
86	.0637 684	.0563 582	.0497 729	.0439 269	.0387 423	
87	.0840 575+	.0751 231	.0670 911	.0598 778	.0534 061	
88	.1099 703	.0993 660	.0897 232	.0809 638	.0730 146	
89	.1427 329	.1303 673	.1189 950+	.1085 472	.0989 581	
90	.1836 950+	.1695 646	.1564 234	.1442 147	.1328 836	
91	.2342 651	.2184 960	.2036 678	.1897 389	.1766 674	
92	.2957 911	.2786 851	.2624 230	.2469 793	.2323 270	
93	.3693 585+	.3514 392	.3342 186	.3176 869	.3018 320	
94	.4554 685-	.4375 157	.4200 776	.4031 570	.3867 545+	
95	.5535 421	.5365 969	.5199 624	.5036 499	.4876 687	
96	.6611 797	.6464 868	.6319 115-	.6174 678	.6031 685+	
97	.7730 755-	.7619 134	.7507 253	.7395 228	.7283 168	
98	.8794 543	.8727 749	.8660 109	.8591 683	.8522 531	
99	.9638 520	.9616 105-	.9593 174	.9569 740	.9545 816	
100	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .58$ to 1.00 $q = 2$

	$p = 35$	$p = 36$	$p = 37$	$p = 38$	$p = 39$
$B(p, q) = .7936\ 5079 \times \frac{1}{10^3}$		$.7507\ 5075 \times \frac{1}{10^3}$	$.7112\ 3755 \times \frac{1}{10^3}$	$.6747\ 6383 \times \frac{1}{10^3}$	$.6410\ 2564 \times \frac{1}{10^3}$
x					
.58	.0000 001				
.59	.0000 001	.0000 001	.0000 001		
.60	.0000 003	.0000 002	.0000 001	.0000 001	
.61	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001
.62	.0000 008	.0000 005 ⁻	.0000 003	.0000 002	.0000 001
.63	.0000 013	.0000 009	.0000 006	.0000 004	.0000 002
.64	.0000 022	.0000 015 ⁻	.0000 010	.0000 006	.0000 004
.65	.0000 038	.0000 025 ⁺	.0000 017	.0000 011	.0000 007
.66	.0000 062	.0000 042	.0000 029	.0000 019	.0000 013
.67	.0000 103	.0000 071	.0000 048	.0000 033	.0000 023
.68	.0000 168	.0000 117	.0000 082	.0000 057	.0000 040
.69	.0000 271	.0000 192	.0000 136	.0000 096	.0000 068
.70	.0000 436	.0000 313	.0000 225 ⁻	.0000 161	.0000 116
.71	.0000 694	.0000 506	.0000 368	.0000 268	.0000 195 ⁻
.72	.0001 097	.0000 810	.0000 598	.0000 441	.0000 325 ⁺
.73	.0001 720	.0001 288	.0000 964	.0000 721	.0000 539
.74	.0002 676	.0002 031	.0001 541	.0001 168	.0000 885 ⁻
.75	.0004 132	.0003 171	.0002 443	.0001 877	.0001 441
.76	.0006 333	.0004 936	.0003 845 ⁻	.0002 993	.0002 329
.77	.0009 634	.0007 607	.0006 003	.0004 734	.0003 731
.78	.0014 549	.0011 635 ⁺	.0009 299	.0007 428	.0005 930
.79	.0021 809	.0017 662	.0014 296	.0011 564	.0009 349
.80	.0032 452	.0026 611	.0021 808	.0017 862	.0014 622
.81	.0047 933	.0039 790	.0033 011	.0027 372	.0022 684
.82	.0070 276	.0059 047	.0049 584	.0041 614	.0034 907
.83	.0102 263	.0086 954	.0073 895 ⁺	.0062 763	.0053 281
.84	.0147 679	.0127 058	.0109 255 ⁻	.0093 896	.0080 655 ⁻
.85	.0211 613	.0184 188	.0160 229	.0139 314	.0121 068
.86	.0300 814	.0264 839	.0233 040	.0204 955 ⁻	.0180 166
.87	.0424 099	.0377 608	.0336 038	.0298 895 ⁻	.0265 729
.88	.0592 785 ⁻	.0533 688	.0480 239	.0431 933	.0388 305 ⁻
.89	.0821 092	.0747 346	.0679 889	.0618 230	.0561 909
.90	.1126 420	.1036 306	.0952 951	.0875 904	.0804 737
.91	.1529 315 ⁻	.1421 857	.1321 355 ⁻	.1227 426	.1139 701
.92	.2052 852	.1928 384	.1810 693	.1699 491	.1594 493
.93	.2720 961	.2581 837	.2448 858	.2321 845 ⁻	.2200 614
.94	.3554 975 ⁺	.3406 354	.3262 770	.3124 153	.2990 424
.95	.4567 293	.4417 818	.4271 872	.4129 477	.3990 641
.96	.5750 484	.5612 472	.5476 301	.5342 043	.5209 764
.97	.7059 347	.6947 775 ⁺	.6836 544	.6725 734	.6615 419
.98	.8382 269	.8311 266	.8239 750 ⁺	.8167 771	.8095 375 ⁻
.99	.9496 544	.9471 220	.9445 452	.9419 253	.9392 634
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .62$ to 1.00 $q = 2$ $p = 41$ to 45

	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$B(p, q) = .5807\ 2009 \times \frac{1}{10^8}$	$.5537\ 0986 \times \frac{1}{10^8}$	$.5285\ 4123 \times \frac{1}{10^8}$	$.5050\ 5051 \times \frac{1}{10^8}$	$.4830\ 9179 \times \frac{1}{10^8}$	
x					
.62	.0000 001				
.63	.0000 001	.0000 001			
.64	.0000 002	.0000 001	.0000 001		.0000 001
.65	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.66	.0000 006	.0000 004	.0000 003	.0000 002	.0000 002
.67	.0000 011	.0000 007	.0000 005 ⁺	.0000 003	.0000 004
.68	.0000 019	.0000 013	.0000 009	.0000 006	.0000 008
.69	.0000 034	.0000 024	.0000 017	.0000 012	.0000 016
.70	.0000 059	.0000 042	.0000 030	.0000 022	
.71	.0000 103	.0000 075 ⁻	.0000 054	.0000 039	.0000 028
.72	.0000 177	.0000 130	.0000 096	.0000 070	.0000 052
.73	.0000 301	.0000 224	.0000 167	.0000 125 ⁻	.0000 093
.74	.0000 507	.0000 384	.0000 290	.0000 219	.0000 166
.75	.0000 849	.0000 651	.0000 499	.0000 382	.0000 292
.76	.0001 407	.0001 093	.0000 849	.0000 659	.0000 511
.77	.0002 314	.0001 821	.0001 433	.0001 126	.0000 885 ⁺
.78	.0003 774	.0003 008	.0002 397	.0001 909	.0001 519
.79	.0006 101	.0004 925 ⁺	.0003 974	.0003 205 ⁺	.0002 584
.80	.0009 783	.0007 997	.0006 533	.0005 336	.0004 356
.81	.0015 555 ⁺	.0012 872	.0010 647	.0008 803	.0007 275 ⁻
.82	.0024 525 ⁺	.0020 543	.0017 199	.0014 394	.0012 041
.83	.0038 341	.0032 502	.0027 540	.0023 326	.0019 748
.84	.0059 425 ⁺	.0050 974	.0043 705 ⁺	.0037 458	.0032 091
.85	.0091 302	.0079 235 ⁺	.0068 734	.0059 600	.0051 660
.86	.0139 026	.0122 046	.0107 095 ⁺	.0093 939	.0082 367
.87	.0209 746	.0186 226	.0165 277	.0146 628	.0130 034
.88	.0313 409	.0281 390	.0252 543	.0226 567	.0203 189
.89	.0463 598	.0420 840	.0381 878	.0346 396	.0314 100
.90	.0678 443	.0622 571	.0571 089	.0523 678	.0480 038
.91	.0981 454	.0910 262	.0843 935 ⁻	.0782 173	.0724 693
.92	.1401 989	.1313 939	.1231 004	.1152 930	.1079 469
.93	.1974 749	.1869 735 ⁺	.1769 747	.1674 595 ⁺	.1584 093
.94	.2737 273	.2617 656	.2502 538	.2391 811	.2285 363
.95	.3723 640	.3595 449	.3470 768	.3349 567	.3231 808
.96	.4951 360	.4825 325 ⁺	.4701 451	.4579 766	.4460 294
.97	.6396 552	.6288 127	.6180 449	.6073 574	.5967 548
.98	.7949 512	.7876 132	.7802 508	.7728 677	.7654 679
.99	.9338 177	.9310 361	.9282 168	.9253 607	.9224 690
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .66$ to 1.00 $q = 2$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .4625\ 3469 \times \frac{1}{10^8}$		$.4432\ 6241 \times \frac{1}{10^8}$	$.4251\ 7007 \times \frac{1}{10^8}$	$.4081\ 6327 \times \frac{1}{10^8}$
x				
.66	.0000 001	.0000 001		
.67	.0000 002	.0000 001	.0000 001	.0000 001
.68	.0000 003	.0000 002	.0000 001	.0000 001
.69	.0000 006	.0000 004	.0000 003	.0000 002
.70	.0000 011	.0000 008	.0000 006	.0000 004
.71	.0000 021	.0000 015 ⁻	.0000 011	.0000 008
.72	.0000 038	.0000 028	.0000 020	.0000 015 ⁺
.73	.0000 069	.0000 052	.0000 038	.0000 029
.74	.0000 125 ⁺	.0000 094	.0000 071	.0000 054
.75	.0000 224	.0000 171	.0000 131	.0000 100
.76	.0000 396	.0000 307	.0000 238	.0000 184
.77	.0000 695 ⁺	.0000 546	.0000 429	.0000 336
.78	.0001 209	.0000 962	.0000 765 ⁻	.0000 608
.79	.0002 083	.0001 678	.0001 351	.0001 087
.80	.0003 554	.0002 899	.0002 364	.0001 927
.81	.0006 010	.0004 963	.0004 097	.0003 381
.82	.0010 069	.0008 417	.0007 033	.0005 875 ⁻
.83	.0016 713	.0014 139	.0011 958	.0010 109
.84	.0027 482	.0023 527	.0020 134	.0017 224
.85	.0044 761	.0038 769	.0033 568	.0029 055 ⁻
.86	.0072 194	.0063 255 ⁺	.0055 404	.0048 512
.87	.0115 277	.0102 159	.0090 503	.0080 151
.88	.0182 159	.0163 250 ⁺	.0146 256	.0130 990
.89	.0284 717	.0257 997	.0233 711	.0211 647
.90	.0439 889	.0402 970	.0369 036	.0337 859
.91	.0671 224	.0621 509	.0575 305 ⁺	.0532 385 ⁻
.92	.1010 383	.0945 442	.0884 425 ⁺	.0827 120
.93	.1498 056	.1416 302	.1338 653	.1264 935 ⁻
.94	.2183 077	.2084 839	.1990 530	.1900 033
.95	.3117 452	.3006 452	.2898 758	.2794 318
.96	.4343 052	.4228 053	.4115 305 ⁺	.4004 812
.97	.5862 417	.5758 224	.5655 006	.5552 799
.98	.7580 550 ⁻	.7506 324	.7432 034	.7357 714
.99	.9195 425 ⁺	.9165 823	.9135 894	.9105 647
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

p to q	$q = 2.5$					$p =$
	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$
$(p, q) = .7363\ 1078 \times \frac{1}{10}$		$.5079\ 3651 \times \frac{1}{10}$	$.3681\ 5539 \times \frac{1}{10}$	$.2770\ 5628 \times \frac{1}{10}$	$.2147\ 5731 \times \frac{1}{10}$	$.1704\ 9100 \times \frac{1}{10}$
$\cdot 01$	.0000 537	.0000 065 ⁻	.0000 008	.0000 001		
$\cdot 02$	.0003 007	.0000 513	.0000 086	.0000 014	.0000 002	
$\cdot 03$	.0008 198	.0001 712	.0000 350 ⁺	.0000 070	.0000 014	.0000 000
$\cdot 04$	.0016 645 ⁻	.0004 013	.0000 947	.0000 220	.0000 050 ⁺	.0000 010
$\cdot 05$	.0028 758	.0007 746	.0002 044	.0000 530	.0000 136	.0000 030
$\cdot 06$	.0044 861	.0013 230	.0003 822	.0001 086	.0000 305 ⁻	.0000 080
$\cdot 07$	.0065 218	.0020 762	.0006 476	.0001 987	.0000 602	.0000 150
$\cdot 08$	.0090 042	.0030 625 ⁻	.0010 207	.0003 347	.0001 083	.0000 300
$\cdot 09$	.0119 506	.0043 085 ⁺	.0015 224	.0005 293	.0001 816	.0000 600
$\cdot 10$	.0153 747	.0058 392	.0021 738	.0007 964	.0002 879	.0001 000
$\cdot 11$	.0192 876	.0076 779	.0029 963	.0011 508	.0004 362	.0001 600
$\cdot 12$	.0236 975 ⁻	.0098 465 ⁻	.0040 114	.0016 085 ⁺	.0006 366	.0002 400
$\cdot 13$	.0286 103	.0123 651	.0052 404	.0021 862	.0009 003	.0003 600
$\cdot 14$	.0340 299	.0152 523	.0067 046	.0029 014	.0012 395 ⁺	.0005 200
$\cdot 15$	.0399 583	.0185 255 ⁻	.0084 247	.0037 721	.0016 675 ⁻	.0007 200
$\cdot 16$	.0463 959	.0222 001	.0104 212	.0048 169	.0021 984	.0009 900
$\cdot 17$	.0533 411	.0262 903	.0127 139	.0060 549	.0028 473	.0013 200
$\cdot 18$	.0607 913	.0308 087	.0153 223	.0075 052	.0036 303	.0017 300
$\cdot 19$	.0687 422	.0357 667	.0182 650 ⁺	.0091 875 ⁻	.0045 641	.0022 400
$\cdot 20$	.0771 886	.0411 741	.0215 599	.0111 213	.0056 660	.0028 500
$\cdot 21$	.0861 238	.0470 391	.0252 242	.0133 263	.0069 543	.0035 900
$\cdot 22$	.0955 402	.0533 689	.0292 740	.0158 220	.0084 475 ⁺	.0044 600
$\cdot 23$	.1054 291	.0601 690	.0337 248	.0186 278	.0101 648	.0054 900
$\cdot 24$	.1157 809	.0674 439	.0385 909	.0217 628	.0121 258	.0066 800
$\cdot 25$	.1265 850 ⁻	.0751 965 ⁺	.0438 857	.0252 457	.0143 502	.0080 700
$\cdot 26$	.1378 301	.0834 285 ⁺	.0496 214	.0290 949	.0168 582	.0096 700
$\cdot 27$	.1495 041	.0921 404	.0558 093	.0333 282	.0196 699	.0114 900
$\cdot 28$	.1615 940	.1013 313	.0624 595 ⁻	.0379 626	.0228 056	.0135 600
$\cdot 29$	.1740 864	.1109 992	.0695 808	.0430 149	.0262 856	.0159 000
$\cdot 30$	.1869 670	.1211 409	.0771 809	.0485 005 ⁺	.0301 298	.0185 300
$\cdot 31$	.2002 209	.1317 520	.0852 664	.0544 346	.0343 580	.0214 700
$\cdot 32$	.2138 328	.1428 268	.0938 425 ⁺	.0608 310	.0389 898	.0247 500
$\cdot 33$	.2277 868	.1543 587	.1029 132	.0677 028	.0440 442	.0283 800
$\cdot 34$	.2420 664	.1663 399	.1124 811	.0750 619	.0495 396	.0323 800
$\cdot 35$	.2566 548	.1787 614	.1225 476	.0829 192	.0554 939	.0367 900
$\cdot 36$	.2715 347	.1916 134	.1331 128	.0912 844	.0619 243	.0416 200
$\cdot 37$	.2866 884	.2048 850 ⁻	.1441 754	.1001 659	.0688 471	.0468 900
$\cdot 38$	.3020 977	.2185 640	.1557 328	.1095 708	.0762 775 ⁺	.0526 200
$\cdot 39$	.3177 444	.2326 377	.1677 811	.1195 051	.0842 301	.0588 300
$\cdot 40$	.3336 096	.2470 920	.1803 149	.1299 730	.0927 180	.0655 500
$\cdot 41$	.3496 744	.2619 123	.1933 277	.1409 776	.1017 533	.0728 000
$\cdot 42$	.3659 195 ⁻	.2770 829	.2068 115 ⁻	.1525 204	.1113 467	.0805 800
$\cdot 43$	.3823 255 ⁻	.2925 871	.2207 568	.1646 013	.1215 075 ⁻	.0889 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 2.5$

	$p = 2.5$	$p = 3$	$p = 3.5$	$p = 4$	$p =$
$B(p, q) = .7363 \ 1078 \times \frac{1}{10}$		$.5079 \ 3651 \times \frac{1}{10}$	$.3681 \ 5539 \times \frac{1}{10}$	$.2770 \ 5628 \times \frac{1}{10}$	$.2147$
x					
.61	.6822 556	.6055 273	.5322 924	.4640 391	.4016
.62	.6979 023	.6233 144	.5515 373	.4840 939	.4218
.63	.7133 116	.6409 736	.5707 986	.5043 281	.4425
.64	.7284 653	.6584 781	.5900 433	.5247 060	.4634
.65	.7433 452	.6758 011	.6092 379	.5451 902	.4847
.66	.7579 336	.6929 160	.6283 482	.5657 420	.5061
.67	.7722 132	.7097 960	.6473 396	.5863 211	.5278
.68	.7861 672	.7264 146	.6661 769	.6068 862	.5496
.69	.7997 791	.7427 455	.6848 247	.6273 946	.5715
.70	.8130 330	.7587 624	.7032 470	.6478 024	.5934
.71	.8259 136	.7744 398	.7214 080	.6680 648	.6154
.72	.8384 060	.7897 521	.7392 714	.6881 361	.6373
.73	.8504 959	.8046 744	.7568 011	.7079 698	.6590
.74	.8621 699	.8191 823	.7739 612	.7275 185	.6807
.75	.8734 150 ⁺	.8332 520	.7907 157	.7467 346	.7021
.76	.8842 191	.8468 603	.8070 291	.7655 701	.7232
.77	.8945 709	.8599 848	.8228 666	.7839 765 ⁺	.7439
.78	.9044 598	.8726 042	.8381 936	.8019 058	.7643
.79	.9138 762	.8846 979	.8529 765 ⁺	.8193 098	.7842
.80	.9228 114	.8962 464	.8671 827	.8361 409	.8036
.81	.9312 578	.9072 316	.8807 805 ⁺	.8523 523	.8223
.82	.9392 087	.9176 365	.8937 398	.8678 980	.8404
.83	.9466 589	.9274 456	.9060 318	.8827 334	.8578
.84	.9536 041	.9366 451	.9176 295	.8968 154	.8744
.85	.9600 417	.9452 230	.9285 080	.9101 030	.8902
.86	.9659 701	.9531 692	.9386 448	.9225 576	.9050
.87	.9713 897	.9604 757	.9480 199	.9341 436	.9189
.88	.9763 025 ⁺	.9671 370	.9566 165	.9448 285 ⁺	.9318
.89	.9807 124	.9731 505	.9644 211	.9545 844	.9437
.90	.9846 253	.9785 163	.9714 243	.9633 877	.9544
.91	.9880 494	.9832 380	.9776 213	.9712 209	.9640
.92	.9909 958	.9873 232	.9830 123	.9780 729	.9725
.93	.9934 782	.9907 838	.9876 039	.9839 406	.9797
.94	.9955 139	.9936 370	.9914 100	.9888 305 ⁺	.9858
.95	.9971 242	.9959 061	.9944 520	.9927 608	.9908
.96	.9983 355 ⁺	.9976 218	.9967 658	.9957 638	.9946
.97	.9991 802	.9988 244	.9983 955	.9978 907	.9973
.98	.9996 993	.9995 672	.9994 071	.9992 178	.9989
.99	.9999 463	.9999 224	.9998 933	.9998 587	.9998
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .03$ to $.60$ $q = 2.5$

	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$
$B(p, q) = .1380\ 5827 \times \frac{x}{10}$	$.1136\ 6411 \times \frac{x}{10}$	$.9491\ 5061 \times \frac{x}{10}$	$.8023\ 3492 \times \frac{x}{10}$	$.6854\ 9767 \times \frac{x}{10}$	
x					
.03	.0000 001				
.04	.0000 003	.0000 001			
.05	.0000 009	.0000 002	.0000 001		
.06	.0000 023	.0000 006	.0000 002		
.07	.0000 053	.0000 016	.0000 005 ⁻	.0000 001	
.08	.0000 110	.0000 035 ⁻	.0000 011	.0000 003	.0000 001
.09	.0000 207	.0000 069	.0000 023	.0000 008	.0000 002
.10	.0000 365 ⁻	.0000 128	.0000 045 ⁻	.0000 016	.0000 005 ⁺
.11	.0000 608	.0000 224	.0000 082	.0000 030	.0000 011
.12	.0000 967	.0000 372	.0000 142	.0000 054	.0000 020
.13	.0001 481	.0000 593	.0000 236	.0000 093	.0000 037
.14	.0002 194	.0000 912	.0000 376	.0000 154	.0000 063
.15	.0003 160	.0001 359	.0000 580	.0000 246	.0000 104
.16	.0004 442	.0001 972	.0000 870	.0000 381	.0000 166
.17	.0006 109	.0002 795 ⁺	.0001 270	.0000 574	.0000 258
.18	.0008 242	.0003 880	.0001 814	.0000 843	.0000 390
.19	.0010 932	.0005 285 ⁺	.0002 538	.0001 212	.0000 576
.20	.0014 277	.0007 080	.0003 488	.0001 708	.0000 832
.21	.0018 387	.0009 342	.0004 715 ⁻	.0002 366	.0001 181
.22	.0023 384	.0012 157	.0006 278	.0003 224	.0001 647
.23	.0029 398	.0015 623	.0008 248	.0004 329	.0002 261
.24	.0036 569	.0019 846	.0010 701	.0005 737	.0003 060
.25	.0045 050 ⁺	.0024 947	.0013 725 ⁻	.0007 508	.0004 086
.26	.0055 002	.0031 052	.0017 418	.0009 715 ⁻	.0005 391
.27	.0066 597	.0038 304	.0021 889	.0012 438	.0007 033
.28	.0080 015 ⁺	.0046 852	.0027 259	.0015 770	.0009 078
.29	.0095 448	.0056 861	.0033 659	.0019 813	.0011 605 ⁺
.30	.0113 093	.0068 504	.0041 233	.0024 681	.0014 700
.31	.0133 159	.0081 966	.0050 138	.0030 500 ⁺	.0018 463
.32	.0155 860	.0097 444	.0060 543	.0037 409	.0023 002
.33	.0181 418	.0115 143	.0072 628	.0045 562	.0028 443
.34	.0210 061	.0135 282	.0086 589	.0055 122	.0034 921
.35	.0242 022	.0158 087	.0102 632	.0066 271	.0042 587
.36	.0277 539	.0183 793	.0120 976	.0079 203	.0051 606
.37	.0316 851	.0212 644	.0141 852	.0094 125 ⁻	.0062 160
.38	.0360 202	.0244 891	.0165 503	.0111 260	.0074 444
.39	.0407 836	.0280 794	.0192 183	.0130 847	.0088 670
.40	.0459 996	.0320 615 ⁺	.0222 157	.0153 135 ⁺	.0105 068
.41	.0516 926	.0364 624	.0255 700	.0178 390	.0123 881
.42	.0578 864	.0413 092	.0293 094	.0206 891	.0145 373
.43	.0646 045 ⁺	.0466 292	.0334 631	.0238 928	.0169 821
.44	.0718 701	.0524 500 ⁺	.0380 609	.0274 804	.0197 519
.45	.0797 052	.0587 988	.0431 331	.0314 835 ⁻	.0228 777

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 2.5$

	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$
$B(p, q) = .1380\ 5827 \times \frac{x}{10}$	$.1136\ 6411 \times \frac{x}{10}$	$.9491\ 5061 \times \frac{x}{108}$	$.8023\ 3492 \times \frac{x}{108}$	$.6854\ 9$	
$\cdot 61$	$\cdot 2953\ 218$	$\cdot 2512\ 579$	$\cdot 2128\ 035^-$	$\cdot 1795\ 007$	$\cdot 1508\ 5$
$\cdot 62$	$\cdot 3147\ 328$	$\cdot 2697\ 478$	$\cdot 2301\ 683$	$\cdot 1956\ 109$	$\cdot 1656\ 3$
$\cdot 63$	$\cdot 3347\ 971$	$\cdot 2890\ 146$	$\cdot 2484\ 093$	$\cdot 2126\ 710$	$\cdot 1814\ 2$
$\cdot 64$	$\cdot 3554\ 906$	$\cdot 3090\ 440$	$\cdot 2675\ 233$	$\cdot 2306\ 899$	$\cdot 1982\ 3$
$\cdot 65$	$\cdot 3767\ 853$	$\cdot 3298\ 169$	$\cdot 2875\ 023$	$\cdot 2496\ 720$	$\cdot 2160\ 7$
$\cdot 66$	$\cdot 3986\ 489$	$\cdot 3513\ 094$	$\cdot 3083\ 331$	$\cdot 2696\ 161$	$\cdot 2349\ 6$
$\cdot 67$	$\cdot 4210\ 448$	$\cdot 3734\ 926$	$\cdot 3299\ 967$	$\cdot 2905\ 154$	$\cdot 2549\ 1$
$\cdot 68$	$\cdot 4439\ 321$	$\cdot 3963\ 322$	$\cdot 3524\ 683$	$\cdot 3123\ 565^+$	$\cdot 2759\ 2$
$\cdot 69$	$\cdot 4672\ 651$	$\cdot 4197\ 886$	$\cdot 3757\ 171$	$\cdot 3351\ 196$	$\cdot 2979\ 7$
$\cdot 70$	$\cdot 4909\ 940$	$\cdot 4438\ 163$	$\cdot 3997\ 053$	$\cdot 3587\ 775^+$	$\cdot 3210\ 5$
$\cdot 71$	$\cdot 5150\ 641$	$\cdot 4683\ 641$	$\cdot 4243\ 884$	$\cdot 3832\ 953$	$\cdot 3451\ 5$
$\cdot 72$	$\cdot 5394\ 161$	$\cdot 4933\ 749$	$\cdot 4497\ 148$	$\cdot 4086\ 297$	$\cdot 3702\ 2$
$\cdot 73$	$\cdot 5639\ 862$	$\cdot 5187\ 856$	$\cdot 4756\ 253$	$\cdot 4347\ 290$	$\cdot 3962\ 3$
$\cdot 74$	$\cdot 5887\ 061$	$\cdot 5445\ 268$	$\cdot 5020\ 532$	$\cdot 4615\ 324$	$\cdot 4231\ 3$
$\cdot 75$	$\cdot 6135\ 028$	$\cdot 5705\ 231$	$\cdot 5289\ 239$	$\cdot 4889\ 696$	$\cdot 4508\ 5$
$\cdot 76$	$\cdot 6382\ 992$	$\cdot 5966\ 929$	$\cdot 5561\ 548$	$\cdot 5169\ 605^-$	$\cdot 4793\ 1$
$\cdot 77$	$\cdot 6630\ 138$	$\cdot 6229\ 485^-$	$\cdot 5836\ 553$	$\cdot 5454\ 150^-$	$\cdot 5084\ 4$
$\cdot 78$	$\cdot 6875\ 610$	$\cdot 6491\ 961$	$\cdot 6113\ 265^-$	$\cdot 5742\ 326$	$\cdot 5381\ 4$
$\cdot 79$	$\cdot 7118\ 517$	$\cdot 6753\ 364$	$\cdot 6390\ 617$	$\cdot 6033\ 026$	$\cdot 5682\ 8$
$\cdot 80$	$\cdot 7357\ 930$	$\cdot 7012\ 642$	$\cdot 6667\ 460$	$\cdot 6325\ 035^-$	$\cdot 5987\ 6$
$\cdot 81$	$\cdot 7592\ 891$	$\cdot 7268\ 693$	$\cdot 6942\ 572$	$\cdot 6617\ 035^+$	$\cdot 6294\ 2$
$\cdot 82$	$\cdot 7822\ 413$	$\cdot 7520\ 366$	$\cdot 7214\ 653$	$\cdot 6907\ 607$	$\cdot 6601\ 2$
$\cdot 83$	$\cdot 8045\ 490$	$\cdot 7766\ 466$	$\cdot 7482\ 337$	$\cdot 7195\ 230$	$\cdot 6907\ 0$
$\cdot 84$	$\cdot 8261\ 099$	$\cdot 8005\ 765^-$	$\cdot 7744\ 193$	$\cdot 7478\ 291$	$\cdot 7209\ 7$
$\cdot 85$	$\cdot 8468\ 208$	$\cdot 8237\ 002$	$\cdot 7998\ 739$	$\cdot 7755\ 091$	$\cdot 7507\ 6$
$\cdot 86$	$\cdot 8665\ 788$	$\cdot 8458\ 900$	$\cdot 8244\ 445^-$	$\cdot 8023\ 853$	$\cdot 7798\ 4$
$\cdot 87$	$\cdot 8852\ 820$	$\cdot 8670\ 175^+$	$\cdot 8479\ 751$	$\cdot 8282\ 740$	$\cdot 8080\ 2$
$\cdot 88$	$\cdot 9028\ 305^-$	$\cdot 8869\ 549$	$\cdot 8703\ 080$	$\cdot 8529\ 866$	$\cdot 8350\ 8$
$\cdot 89$	$\cdot 9191\ 282$	$\cdot 9055\ 767$	$\cdot 8912\ 861$	$\cdot 8763\ 320$	$\cdot 8607\ 8$
$\cdot 90$	$\cdot 9340\ 845^+$	$\cdot 9227\ 620$	$\cdot 9107\ 548$	$\cdot 8981\ 197$	$\cdot 8849\ 1$
$\cdot 91$	$\cdot 9476\ 159$	$\cdot 9383\ 964$	$\cdot 9285\ 653$	$\cdot 9181\ 625^+$	$\cdot 9072\ 2$
$\cdot 92$	$\cdot 9596\ 488$	$\cdot 9523\ 760$	$\cdot 9445\ 781$	$\cdot 9362\ 815^-$	$\cdot 9275\ 1$
$\cdot 93$	$\cdot 9701\ 222$	$\cdot 9646\ 100$	$\cdot 9586\ 677$	$\cdot 9523\ 111$	$\cdot 9455\ 5$
$\cdot 94$	$\cdot 9789\ 920$	$\cdot 9750\ 265^-$	$\cdot 9707\ 286$	$\cdot 9661\ 064$	$\cdot 9611\ 6$
$\cdot 95$	$\cdot 9862\ 353$	$\cdot 9835\ 781$	$\cdot 9806\ 829$	$\cdot 9775\ 526$	$\cdot 9741\ 9$
$\cdot 96$	$\cdot 9918\ 574$	$\cdot 9902\ 506$	$\cdot 9884\ 906$	$\cdot 9865\ 778$	$\cdot 9845\ 1$
$\cdot 97$	$\cdot 9959\ 016$	$\cdot 9950\ 752$	$\cdot 9941\ 653$	$\cdot 9931\ 712$	$\cdot 9920\ 9$
$\cdot 98$	$\cdot 9984\ 636$	$\cdot 9981\ 471$	$\cdot 9977\ 969$	$\cdot 9974\ 123$	$\cdot 9969\ 9$
$\cdot 99$	$\cdot 9997\ 195^-$	$\cdot 9996\ 605^-$	$\cdot 9995\ 948$	$\cdot 9995\ 224$	$\cdot 9994\ 4$
1.00	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

$q = 2.5$

$p = 8.5$ to 11

$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$
$\frac{1}{10^3} \cdot 4504\ 3364 \times \frac{1}{10^3}$	$\cdot 3972\ 7706 \times \frac{1}{10^3}$	$\cdot 3525\ 1328 \times \frac{1}{10^3}$	$\cdot 3145\ 1100 \times \frac{1}{10^3}$	$\cdot 2820\ 1063 \times \frac{1}{10^3}$
$\cdot 0000\ 001$				
$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 023$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 038$	$\cdot 0000\ 017$	$\cdot 0000\ 008$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 060$	$\cdot 0000\ 028$	$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 003$
$\cdot 0000\ 094$	$\cdot 0000\ 045^-$	$\cdot 0000\ 022$	$\cdot 0000\ 010$	$\cdot 0000\ 005^-$
$\cdot 0000\ 143$	$\cdot 0000\ 070$	$\cdot 0000\ 034$	$\cdot 0000\ 017$	$\cdot 0000\ 008$
$\cdot 0000\ 214$	$\cdot 0000\ 108$	$\cdot 0000\ 054$	$\cdot 0000\ 027$	$\cdot 0000\ 013$
$\cdot 0000\ 314$	$\cdot 0000\ 161$	$\cdot 0000\ 083$	$\cdot 0000\ 042$	$\cdot 0000\ 022$
$\cdot 0000\ 453$	$\cdot 0000\ 238$	$\cdot 0000\ 124$	$\cdot 0000\ 065^-$	$\cdot 0000\ 034$
$\cdot 0000\ 642$	$\cdot 0000\ 344$	$\cdot 0000\ 184$	$\cdot 0000\ 098$	$\cdot 0000\ 052$
$\cdot 0000\ 898$	$\cdot 0000\ 491$	$\cdot 0000\ 267$	$\cdot 0000\ 145^+$	$\cdot 0000\ 079$
$\cdot 0001\ 239$	$\cdot 0000\ 690$	$\cdot 0000\ 383$	$\cdot 0000\ 212$	$\cdot 0000\ 117$
$\cdot 0001\ 689$	$\cdot 0000\ 957$	$\cdot 0000\ 541$	$\cdot 0000\ 305^-$	$\cdot 0000\ 171$
$\cdot 0002\ 274$	$\cdot 0001\ 312$	$\cdot 0000\ 754$	$\cdot 0000\ 433$	$\cdot 0000\ 247$
$\cdot 0003\ 030$	$\cdot 0001\ 777$	$\cdot 0001\ 039$	$\cdot 0000\ 606$	$\cdot 0000\ 353$
$\cdot 0003\ 995^+$	$\cdot 0002\ 382$	$\cdot 0001\ 416$	$\cdot 0000\ 839$	$\cdot 0000\ 496$
$\cdot 0005\ 218$	$\cdot 0003\ 160$	$\cdot 0001\ 908$	$\cdot 0001\ 149$	$\cdot 0000\ 690$
$\cdot 0006\ 753$	$\cdot 0004\ 152$	$\cdot 0002\ 546$	$\cdot 0001\ 557$	$\cdot 0000\ 950^-$
$\cdot 0008\ 665^+$	$\cdot 0005\ 408$	$\cdot 0003\ 365^+$	$\cdot 0002\ 088$	$\cdot 0001\ 293$
$\cdot 0011\ 031$	$\cdot 0006\ 984$	$\cdot 0004\ 409$	$\cdot 0002\ 775^+$	$\cdot 0001\ 743$
$\cdot 0013\ 936$	$\cdot 0008\ 947$	$\cdot 0005\ 727$	$\cdot 0003\ 656$	$\cdot 0002\ 328$
$\cdot 0017\ 480$	$\cdot 0011\ 375^-$	$\cdot 0007\ 380$	$\cdot 0004\ 776$	$\cdot 0003\ 083$
$\cdot 0021\ 775^-$	$\cdot 0014\ 357$	$\cdot 0009\ 439$	$\cdot 0006\ 190$	$\cdot 0004\ 049$
$\cdot 0026\ 949$	$\cdot 0017\ 998$	$\cdot 0011\ 986$	$\cdot 0007\ 961$	$\cdot 0005\ 275^-$
$\cdot 0033\ 147$	$\cdot 0022\ 416$	$\cdot 0015\ 115^+$	$\cdot 0010\ 166$	$\cdot 0006\ 821$
$\cdot 0040\ 530$	$\cdot 0027\ 744$	$\cdot 0018\ 937$	$\cdot 0012\ 893$	$\cdot 0008\ 756$
$\cdot 0049\ 278$	$\cdot 0034\ 134$	$\cdot 0023\ 578$	$\cdot 0016\ 244$	$\cdot 0011\ 164$
$\cdot 0059\ 591$	$\cdot 0041\ 758$	$\cdot 0029\ 180$	$\cdot 0020\ 338$	$\cdot 0014\ 142$
$\cdot 0071\ 689$	$\cdot 0050\ 806$	$\cdot 0035\ 906$	$\cdot 0025\ 311$	$\cdot 0017\ 800$
$\cdot 0085\ 815^+$	$\cdot 0061\ 492$	$\cdot 0043\ 941$	$\cdot 0031\ 320$	$\cdot 0022\ 271$
$\cdot 0102\ 235^+$	$\cdot 0074\ 052$	$\cdot 0053\ 490$	$\cdot 0038\ 540$	$\cdot 0027\ 704$
$\cdot 0121\ 238$	$\cdot 0088\ 746$	$\cdot 0064\ 784$	$\cdot 0047\ 173$	$\cdot 0034\ 270$
$\cdot 0143\ 138$	$\cdot 0105\ 860$	$\cdot 0078\ 079$	$\cdot 0057\ 445^+$	$\cdot 0042\ 167$
$\cdot 0168\ 273$	$\cdot 0125\ 709$	$\cdot 0093\ 659$	$\cdot 0069\ 608$	$\cdot 0051\ 615^-$
$\cdot 0197\ 007$	$\cdot 0148\ 633$	$\cdot 0111\ 838$	$\cdot 0083\ 945^-$	$\cdot 0062\ 865^+$
$\cdot 0229\ 728$	$\cdot 0175\ 000^-$	$\cdot 0132\ 957$	$\cdot 0100\ 768$	$\cdot 0076\ 200$
$\cdot 0266\ 852$	$\cdot 0205\ 209$	$\cdot 0157\ 391$	$\cdot 0120\ 424$	$\cdot 0091\ 933$
$\cdot 0308\ 817$	$\cdot 0239\ 687$	$\cdot 0185\ 548$	$\cdot 0143\ 293$	$\cdot 0110\ 415^+$
$\cdot 0356\ 085^-$	$\cdot 0278\ 889$	$\cdot 0217\ 866$	$\cdot 0169\ 791$	$\cdot 0132\ 033$
$\cdot 0409\ 140$	$\cdot 0323\ 302$	$\cdot 0254\ 820$	$\cdot 0200\ 371$	$\cdot 0157\ 213$
$\cdot 0468\ 489$	$\cdot 0373\ 436$	$\cdot 0296\ 915^+$	$\cdot 0235\ 524$	$\cdot 0186\ 422$
$\cdot 0534\ 656$	$\cdot 0429\ 830$	$\cdot 0344\ 692$	$\cdot 0275\ 778$	$\cdot 0220\ 170$
$\cdot 0608\ 180$	$\cdot 0493\ 047$	$\cdot 0398\ 720$	$\cdot 0321\ 701$	$\cdot 0259\ 010$
$\cdot 0689\ 615^+$	$\cdot 0563\ 672$	$\cdot 0459\ 601$	$\cdot 0373\ 898$	$\cdot 0303\ 537$
$\cdot 0779\ 524$	$\cdot 0642\ 308$	$\cdot 0527\ 966$	$\cdot 0433\ 008$	$\cdot 0354\ 391$
$\cdot 0878\ 473$	$\cdot 0729\ 576$	$\cdot 0604\ 469$	$\cdot 0499\ 708$	$\cdot 0412\ 256$
$\cdot 0987\ 029$	$\cdot 0826\ 105^-$	$\cdot 0689\ 787$	$\cdot 0574\ 706$	$\cdot 0477\ 853$
$\cdot 1105\ 754$	$\cdot 0932\ 529$	$\cdot 0784\ 613$	$\cdot 0658\ 736$	$\cdot 0551\ 946$
$\cdot 1235\ 195^+$	$\cdot 1049\ 484$	$\cdot 0889\ 652$	$\cdot 0752\ 558$	$\cdot 0635\ 332$
$\cdot 1375\ 882$	$\cdot 1177\ 597$	$\cdot 1005\ 613$	$\cdot 0856\ 948$	$\cdot 0728\ 838$
$\cdot 1528\ 317$	$\cdot 1317\ 479$	$\cdot 1133\ 205^+$	$\cdot 0972\ 695^+$	$\cdot 0833\ 316$
$\cdot 1692\ 964$	$\cdot 1469\ 718$	$\cdot 1273\ 124$	$\cdot 1100\ 588$	$\cdot 0949\ 636$
$\cdot 1870\ 245^+$	$\cdot 1634\ 864$	$\cdot 1426\ 042$	$\cdot 1241\ 411$	$\cdot 1078\ 675^-$
$\cdot 2060\ 523$	$\cdot 1813\ 426$	$\cdot 1592\ 602$	$\cdot 1395\ 928$	$\cdot 1221\ 306$
$\cdot 2264\ 094$	$\cdot 2005\ 851$	$\cdot 1773\ 399$	$\cdot 1564\ 873$	$\cdot 1378\ 389$

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION $x = .71$ to 1.00 $q = 2.5$ $p = 8.5$ to 11

	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$
$B(p, q) = .5141\ 2325 \times \frac{1}{10^8}$	$.4504\ 3364 \times \frac{1}{10^8}$	$.3972\ 7706 \times \frac{1}{10^8}$	$.3525\ 1328 \times \frac{1}{10^8}$	$.3145\ 1100 \times \frac{1}{10^8}$	$.2820\ 1063 \times \frac{1}{10^8}$	
.71	.2776 422	.2481 177	.2212 519	.1968 969	.1748 931	.1550 751
.72	.3015 470	.2711 898	.2433 722	.2179 772	.1948 728	.1739 172
.73	.3266 918	.2956 278	.2669 653	.2406 178	.2164 806	.1944 368
.74	.3530 509	.3214 219	.2920 387	.2648 442	.2397 609	.2166 965 ⁺
.75	.3805 856	.3485 491	.3185 866	.2906 691	.2647 454	.2407 477
.76	.4092 433	.3769 714	.3465 881	.3180 901	.2914 515 ⁻	.2666 279
.77	.4389 562	.4066 346	.3760 049	.3470 872	.3198 788	.2943 580
.78	.4696 400	.4374 667	.4067 799	.3776 208	.3500 074	.3239 389
.79	.5011 932	.4693 763	.4388 352	.4096 289	.3817 940	.3553 484
.80	.5334 960	.5022 511	.4720 697	.4430 252	.4151 697	.3885 374
.81	.5664 089	.5359 568	.5063 578	.4776 961	.4500 363	.4234 262
.82	.5997 726	.5703 357	.5415 472	.5134 985 ⁻	.4862 636	.4599 010
.83	.6334 072	.6052 055 ⁺	.5774 572	.5502 575 ⁺	.5236 864	.4978 097
.84	.6671 117	.6403 589	.6138 779	.5877 644	.5621 010	.5369 581
.85	.7006 642	.6755 625 ⁺	.6505 682	.6257 744	.6012 633	.5771 066
.86	.7338 222	.7105 573	.6872 560	.6640 058	.6408 858	.6179 665 ⁺
.87	.7663 232	.7450 587	.7236 372	.7021 388	.6806 366	.6591 975 ⁻
.88	.7978 869	.7787 579	.7593 773	.7398 154	.7201 380	.7004 056
.89	.8282 167	.8113 242	.7941 123	.7766 410	.7589 668	.7411 428
.90	.8570 033	.8424 073	.8274 521	.8121 863	.7966 566	.7809 075 ⁺
.91	.8839 290	.8716 429	.8589 846	.8459 918	.8327 012	.8191 480
.92	.9086 741	.8986 587	.8882 832	.8775 752	.8665 616	.8552 689
.93	.9309 248	.9230 833	.9149 158	.9064 408	.8976 767	.8886 417
.94	.9503 848	.9445 594	.9384 593	.9320 955 ⁻	.9254 792	.9186 219
.95	.9667 899	.9627 604	.9585 183	.9540 695 ⁻	.9494 196	.9445 747
.96	.9799 300	.9774 154	.9747 543	.9719 488	.9690 011	.9659 136
.97	.9896 796	.9883 454	.9869 262	.9854 221	.9838 336	.9821 612
.98	.9960 473	.9955 204	.9949 570	.9943 570	.9937 199	.9930 458
.99	.9992 626	.9991 614	.9990 525 ⁺	.9989 360	.9988 117	.9986 795 ⁻
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .33$ to $.90$ $q = 2.5$ $p = 18$ to 23

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$
$B(p, q) = .8745\ 9936 \times \frac{1}{10^3}$	$.7679\ 4090 \times \frac{1}{10^3}$	$.6786\ 4545 \times \frac{1}{10^3}$	$.6032\ 4040 \times \frac{1}{10^3}$	$.5390\ 6589 \times \frac{1}{10^3}$	$.4840\ 5916 \times \frac{1}{10^3}$	
x						
.33	.0000 001					
.34	.0000 001					
.35	.0000 002	.0000 001				
.36	.0000 004	.0000 001	.0000 001			
.37	.0000 006	.0000 002	.0000 001			
.38	.0000 009	.0000 004	.0000 001	.0000 001		
.39	.0000 014	.0000 006	.0000 002	.0000 001		
.40	.0000 021	.0000 009	.0000 004	.0000 002	.0000 001	
.41	.0000 033	.0000 014	.0000 006	.0000 003	.0000 001	.0000 001
.42	.0000 049	.0000 022	.0000 010	.0000 004	.0000 002	.0000 001
.43	.0000 073	.0000 034	.0000 016	.0000 007	.0000 003	.0000 002
.44	.0000 108	.0000 051	.0000 024	.0000 011	.0000 005 ⁺	.0000 002
.45	.0000 158	.0000 077	.0000 037	.0000 018	.0000 009	.0000 004
.46	.0000 229	.0000 113	.0000 056	.0000 027	.0000 013	.0000 007
.47	.0000 329	.0000 166	.0000 084	.0000 042	.0000 021	.0000 011
.48	.0000 468	.0000 242	.0000 124	.0000 064	.0000 033	.0000 017
.49	.0000 661	.0000 348	.0000 183	.0000 096	.0000 050 ⁻	.0000 026
.50	.0000 926	.0000 498	.0000 267	.0000 142	.0000 076	.0000 040
.51	.0001 287	.0000 705 ⁺	.0000 385 ⁺	.0000 210	.0000 114	.0000 062
.52	.0001 776	.0000 992	.0000 553	.0000 307	.0000 170	.0000 094
.53	.0002 432	.0001 385 ⁺	.0000 786	.0000 445 ⁻	.0000 251	.0000 141
.54	.0003 309	.0001 919	.0001 110	.0000 640	.0000 368	.0000 211
.55	.0004 471	.0002 641	.0001 555 ⁻	.0000 913	.0000 534	.0000 312
.56	.0006 002	.0003 609	.0002 163	.0001 293	.0000 770	.0000 458
.57	.0008 006	.0004 899	.0002 988	.0001 817	.0001 102	.0000 667
.58	.0010 614	.0006 607	.0004 100	.0002 537	.0001 566	.0000 964
.59	.0013 986	.0008 855 ⁺	.0005 589	.0003 517	.0002 207	.0001 382
.60	.0018 323	.0011 795 ⁺	.0007 509	.0004 843	.0003 091	.0001 968
.61	.0023 868	.0015 617	.0010 186	.0006 625 ⁺	.0004 298	.0002 781
.62	.0030 918	.0020 556	.0013 625 ⁻	.0009 005 ⁺	.0005 936	.0003 904
.63	.0039 832	.0026 903	.0018 115 ⁺	.0012 164	.0008 146	.0005 443
.64	.0051 042	.0035 013	.0023 944	.0016 329	.0011 107	.0007 537
.65	.0065 065 ⁺	.0045 317	.0031 467	.0021 790	.0015 050 ⁻	.0010 370
.66	.0082 514	.0058 337	.0041 120	.0028 905 ⁻	.0020 267	.0014 177
.67	.0104 113	.0074 700	.0053 437	.0038 122	.0027 128	.0019 260
.68	.0130 712	.0095 152	.0069 063	.0049 992	.0036 097	.0026 004
.69	.0163 298	.0120 580	.0088 778	.0065 189	.0047 750 ⁻	.0034 896
.70	.0203 015 ⁻	.0152 025 ⁻	.0113 514	.0084 534	.0062 800	.0046 548
.71	.0251 176	.0190 703	.0144 377	.0109 019	.0082 122	.0061 723
.72	.0309 278	.0238 026	.0182 674	.0139 832	.0106 782	.0081 304
.73	.0379 009	.0295 614	.0229 930	.0178 384	.0138 068	.0106 630
.74	.0462 262	.0365 318	.0287 915 ⁺	.0226 342	.0177 523	.0138 933
.75	.0561 136	.0449 225 ⁺	.0358 666	.0285 653	.0226 981	.0179 977
.76	.0677 931	.0549 671	.0444 498	.0358 571	.0288 603	.0231 801
.77	.0815 142	.0669 237	.0548 020	.0447 683	.0364 905 ⁺	.0296 820
.78	.0975 433	.0810 739	.0672 136	.0555 918	.0458 792	.0377 869
.79	.1161 605 ⁺	.0977 208	.0820 034	.0686 553	.0573 572	.0478 231
.80	.1376 540	.1171 843	.0995 156	.0843 206	.0712 963	.0601 664
.81	.1623 133	.1397 951	.1201 155 ⁻	.1029 794	.0881 077	.0752 403
.82	.1904 191	.1658 862	.1441 810	.1250 479	.1082 381	.0935 143
.83	.2222 313	.1957 800	.1720 922	.1509 568	.1321 613	.1154 975 ⁻
.84	.2579 727	.2297 730	.2042 151	.1811 363	.1603 654	.1417 283
.85	.2978 104	.2681 151	.2408 814	.2159 967	.1933 337	.1727 568
.86	.3418 314	.3109 846	.2823 620	.2559 003	.2315 179	.2091 192
.87	.3900 159	.3584 569	.3288 329	.3011 271	.2753 014	.2513 011
.88	.4422 048	.4104 683	.3803 353	.3518 294	.3249 525 ⁺	.2996 882
.89	.4980 644	.4667 733	.4367 257	.4079 776	.3805 642	.3545 028
.90	.5570 466	.5268 969	.4976 199	.4692 945 ⁻	.4419 806	.4157 221

TABLE I. THE $I_x(p, q)$ FUNCTION

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 $x = .91$ to 1.00 $q = 2.5$ $p = 18$ to 23

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$
$B(p, q) = .8745\ 9936 \times \frac{1}{10^8}$	$.7679\ 4090 \times \frac{1}{10^8}$	$.6786\ 4545 \times \frac{1}{10^8}$	$.6032\ 4040 \times \frac{1}{10^8}$	$.5390\ 6589 \times \frac{1}{10^8}$	$.4840\ 5916 \times \frac{1}{10^8}$	
x						
.91	.6183 494	.5900 830	.5623 299	.5351 805 ⁻	.5087 098	.4829 790
.92	.6808 762	.6552 418	.6297 962	.6046 305 ⁺	.5798 244	.5554 467
.93	.7432 035 ⁺	.7209 009	.6985 219	.6761 486	.6538 551	.6317 086
.94	.8035 600	.7851 693	.7665 173	.7476 694	.7286 869	.7096 268
.95	.8598 329	.8457 281	.8312 706	.8165 059	.8014 776	.7862 272
.96	.9096 215 ⁻	.8998 727	.8897 750 ⁺	.8793 542	.8686 356	.8576 442
.97	.9503 748	.9446 519	.9386 625 ⁺	.9324 171	.9259 262	.9192 008
.98	.9796 898	.9771 920	.9745 509	.9717 685 ⁻	.9688 469	.9657 886
.99	.9959 486	.9954 186	.9948 523	.9942 497	.9936 105 ⁺	.9929 346
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .43$ to 1.00 $q = 2.5$ $p = 24$ to 29

	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$
$B(p, q) = .4366\ 0238 \times \frac{1}{10^3}$	$.3954\ 1348 \times \frac{1}{10^3}$	$.3594\ 6680 \times \frac{1}{10^3}$	$.3279\ 3462 \times \frac{1}{10^3}$	$.3001\ 4355 \times \frac{1}{10^3}$	$.2755\ 4162 \times \frac{1}{10^3}$	
x						
.43	.0000 001					
.44	.0000 001	.0000 001				
.45	.0000 002	.0000 001				
.46	.0000 003	.0000 002	.0000 001			
.47	.0000 005 ⁺	.0000 003	.0000 001	.0000 001		
.48	.0000 008	.0000 004	.0000 002	.0000 001	.0000 001	
.49	.0000 014	.0000 007	.0000 004	.0000 002	.0000 001	
.50	.0000 021	.0000 011	.0000 006	.0000 003	.0000 002	.0000 001
.51	.0000 033	.0000 018	.0000 010	.0000 005 ⁺	.0000 003	.0000 001
.52	.0000 052	.0000 028	.0000 016	.0000 009	.0000 005 ⁻	.0000 003
.53	.0000 079	.0000 044	.0000 025 ⁻	.0000 014	.0000 008	.0000 004
.54	.0000 121	.0000 069	.0000 039	.0000 022	.0000 013	.0000 007
.55	.0000 182	.0000 106	.0000 061	.0000 036	.0000 021	.0000 012
.56	.0000 272	.0000 161	.0000 095 ⁻	.0000 056	.0000 033	.0000 019
.57	.0000 403	.0000 243	.0000 146	.0000 088	.0000 052	.0000 031
.58	.0000 592	.0000 363	.0000 222	.0000 136	.0000 083	.0000 050 ⁺
.59	.0000 863	.0000 538	.0000 335 ⁻	.0000 208	.0000 129	.0000 080
.60	.0001 250 ⁻	.0000 792	.0000 501	.0000 317	.0000 200	.0000 126
.61	.0001 796	.0001 157	.0000 744	.0000 478	.0000 306	.0000 196
.62	.0002 562	.0001 677	.0001 096	.0000 715 ⁺	.0000 466	.0000 303
.63	.0003 628	.0002 414	.0001 603	.0001 062	.0000 703	.0000 465 ⁻
.64	.0005 104	.0003 449	.0002 326	.0001 566	.0001 053	.0000 706
.65	.0007 130	.0004 893	.0003 351	.0002 291	.0001 564	.0001 066
.66	.0009 896	.0006 894	.0004 793	.0003 327	.0002 305 ⁺	.0001 595 ⁺
.67	.0013 645 ⁻	.0009 647	.0006 808	.0004 796	.0003 374	.0002 369
.68	.0018 693	.0013 412	.0009 604	.0006 866	.0004 901	.0003 492
.69	.0025 449	.0018 523	.0013 457	.0009 760	.0007 067	.0005 110
.70	.0034 430	.0025 417	.0018 730	.0013 778	.0010 120	.0007 422
.71	.0046 295 ⁻	.0034 656	.0025 897	.0019 319	.0014 389	.0010 702
.72	.0061 869	.0046 956	.0035 574	.0026 906	.0020 318	.0015 321
.73	.0082 184	.0063 223	.0048 551	.0037 223	.0028 494	.0021 780
.74	.0108 515 ⁺	.0084 599	.0065 838	.0051 155 ⁺	.0039 686	.0030 744
.75	.0142 425 ⁺	.0112 501	.0088 711	.0069 840	.0054 899	.0043 094
.76	.0185 816	.0148 683	.0118 769	.0094 723	.0075 432	.0059 986
.77	.0240 976	.0195 288	.0157 998	.0127 628	.0102 943	.0082 918
.78	.0310 632	.0254 910	.0208 838	.0170 830	.0139 536 ⁺	.0113 819
.79	.0397 999	.0330 655 ⁺	.0274 261	.0227 139	.0187 845 ⁺	.0155 140
.80	.0506 818	.0426 199	.0357 834	.0299 987	.0251 138	.0209 966
.81	.0641 380	.0545 831	.0463 793	.0393 508	.0333 414	.0282 131
.82	.0806 533	.0694 482	.0597 087	.0512 616	.0439 501	.0376 335 ⁺
.83	.1007 644	.0877 717	.0763 408	.0663 057	.0575 139	.0498 257
.84	.1250 521	.1101 685 ⁺	.0969 163	.0851 421	.0747 024	.0654 632
.85	.1541 258	.1372 996	.1221 393	.1085 095 ⁺	.0962 806	.0853 292
.86	.1886 001	.1698 508	.1527 589	.1372 119	.1230 986	.1103 110
.87	.2290 590	.2084 990	.1895 386	.1720 913	.1560 689	.1413 827
.88	.2760 057	.2538 625 ⁺	.2332 073	.2139 822	.1961 241	.1795 671
.89	.3297 955 ⁺	.3064 317	.2843 902	.2636 416	.2441 494	.2258 719
.90	.3905 481	.3664 755 ⁺	.3435 103	.3216 491	.3008 810	.2811 884
.91	.4580 370	.4339 211	.4106 590	.3882 692	.3667 625 ⁺	.3461 430
.92	.5315 565 ⁺	.5082 039	.4854 304	.4632 701	.4417 500 ⁻	.4208 908
.93	.6097 691	.5880 901	.5667 100	.5456 972	.5250 608	.5048 409
.94	.6905 417	.6714 806	.6524 880	.6336 051	.6148 690	.5963 136
.95	.7707 945 ⁺	.7552 172	.7395 308	.7237 689	.7079 633	.6921 436
.96	.8464 044	.8349 397	.8232 732	.8114 272	.7994 234	.7872 823
.97	.9122 518	.9050 899	.8977 260	.8901 710	.8824 355 ⁺	.8745 301
.98	.9625 960	.9592 716	.9558 183	.9522 388	.9485 361	.9447 129
.99	.9922 218	.9914 720	.9906 851	.9898 612	.9890 002	.9881 022
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .51 \text{ to } 1.00$
$$q = 2.5$$

$p = 30$ to 36

	$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p = 36$
$B(p, q) = .2536\ 7324 \times \frac{1}{10^8}$	$.2341\ 5991 \times \frac{1}{10^8}$	$.2166\ 8529 \times \frac{1}{10^8}$	$.2009\ 8346 \times \frac{1}{10^8}$	$.1868\ 2970 \times \frac{1}{10^8}$	$.1740\ 3314 \times \frac{1}{10^8}$	$.1624\ 3093 \times \frac{1}{10^8}$	
$\cdot 51$	$\cdot 0000\ 001$						
$\cdot 52$	$\cdot 0000\ 001$	$\cdot 0000\ 001$					
$\cdot 53$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 54$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 55$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$		
$\cdot 56$	$\cdot 0000\ 011$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 57$	$\cdot 0000\ 019$	$\cdot 0000\ 011$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 58$	$\cdot 0000\ 031$	$\cdot 0000\ 019$	$\cdot 0000\ 011$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 59$	$\cdot 0000\ 049$	$\cdot 0000\ 030$	$\cdot 0000\ 019$	$\cdot 0000\ 012$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 003$
$\cdot 60$	$\cdot 0000\ 079$	$\cdot 0000\ 050$	$\cdot 0000\ 031$	$\cdot 0000\ 019$	$\cdot 0000\ 012$	$\cdot 0000\ 008$	$\cdot 0000\ 005$
$\cdot 61$	$\cdot 0000\ 125^+$	$\cdot 0000\ 080$	$\cdot 0000\ 051$	$\cdot 0000\ 032$	$\cdot 0000\ 021$	$\cdot 0000\ 013$	$\cdot 0000\ 008$
$\cdot 62$	$\cdot 0000\ 197$	$\cdot 0000\ 128$	$\cdot 0000\ 083$	$\cdot 0000\ 053$	$\cdot 0000\ 035$	$\cdot 0000\ 022$	$\cdot 0000\ 014$
$\cdot 63$	$\cdot 0000\ 306$	$\cdot 0000\ 202$	$\cdot 0000\ 133$	$\cdot 0000\ 087$	$\cdot 0000\ 057$	$\cdot 0000\ 038$	$\cdot 0000\ 025$
$\cdot 64$	$\cdot 0000\ 473$	$\cdot 0000\ 317$	$\cdot 0000\ 212$	$\cdot 0000\ 141$	$\cdot 0000\ 094$	$\cdot 0000\ 063$	$\cdot 0000\ 042$
$\cdot 65$	$\cdot 0000\ 725^+$	$\cdot 0000\ 493$	$\cdot 0000\ 335$	$\cdot 0000\ 227$	$\cdot 0000\ 154$	$\cdot 0000\ 104$	$\cdot 0000\ 070$
$\cdot 66$	$\cdot 0001\ 102$	$\cdot 0000\ 760$	$\cdot 0000\ 524$	$\cdot 0000\ 361$	$\cdot 0000\ 248$	$\cdot 0000\ 170$	$\cdot 0000\ 117$
$\cdot 67$	$\cdot 0001\ 662$	$\cdot 0001\ 164$	$\cdot 0000\ 814$	$\cdot 0000\ 569$	$\cdot 0000\ 397$	$\cdot 0000\ 277$	$\cdot 0000\ 193$
$\cdot 68$	$\cdot 0002\ 485^+$	$\cdot 0001\ 766$	$\cdot 0001\ 254$	$\cdot 0000\ 889$	$\cdot 0000\ 629$	$\cdot 0000\ 445^+$	$\cdot 0000\ 315$
$\cdot 69$	$\cdot 0003\ 689$	$\cdot 0002\ 660$	$\cdot 0001\ 916$	$\cdot 0001\ 378$	$\cdot 0000\ 990$	$\cdot 0000\ 711$	$\cdot 0000\ 510$
$\cdot 70$	$\cdot 0005\ 435^+$	$\cdot 0003\ 975^+$	$\cdot 0002\ 904$	$\cdot 0002\ 119$	$\cdot 0001\ 544$	$\cdot 0001\ 124$	$\cdot 0000\ 818$
$\cdot 71$	$\cdot 0007\ 948$	$\cdot 0005\ 895^+$	$\cdot 0004\ 367$	$\cdot 0003\ 232$	$\cdot 0002\ 389$	$\cdot 0001\ 764$	$\cdot 0001\ 301$
$\cdot 72$	$\cdot 0011\ 537$	$\cdot 0008\ 677$	$\cdot 0006\ 517$	$\cdot 0004\ 890$	$\cdot 0003\ 664$	$\cdot 0002\ 743$	$\cdot 0002\ 052$
$\cdot 73$	$\cdot 0016\ 625^+$	$\cdot 0012\ 674$	$\cdot 0009\ 651$	$\cdot 0007\ 340$	$\cdot 0005\ 576$	$\cdot 0004\ 232$	$\cdot 0003\ 209$
$\cdot 74$	$\cdot 0023\ 784$	$\cdot 0018\ 377$	$\cdot 0014\ 182$	$\cdot 0010\ 932$	$\cdot 0008\ 418$	$\cdot 0006\ 475^+$	$\cdot 0004\ 976$
$\cdot 75$	$\cdot 0033\ 782$	$\cdot 0026\ 449$	$\cdot 0020\ 683$	$\cdot 0016\ 156$	$\cdot 0012\ 606$	$\cdot 0009\ 826$	$\cdot 0007\ 652$
$\cdot 76$	$\cdot 0047\ 640$	$\cdot 0037\ 787$	$\cdot 0029\ 937$	$\cdot 0023\ 691$	$\cdot 0018\ 729$	$\cdot 0014\ 791$	$\cdot 0011\ 670$
$\cdot 77$	$\cdot 0066\ 702$	$\cdot 0053\ 590$	$\cdot 0043\ 006$	$\cdot 0034\ 474$	$\cdot 0027\ 606$	$\cdot 0022\ 084$	$\cdot 0017\ 650^+$
$\cdot 78$	$\cdot 0092\ 722$	$\cdot 0075\ 444$	$\cdot 0061\ 315$	$\cdot 0049\ 777$	$\cdot 0040\ 369$	$\cdot 0032\ 707$	$\cdot 0026\ 475$
$\cdot 79$	$\cdot 0127\ 966$	$\cdot 0105\ 425^+$	$\cdot 0086\ 757$	$\cdot 0071\ 317$	$\cdot 0058\ 565^+$	$\cdot 0048\ 047$	$\cdot 0039\ 382$
$\cdot 80$	$\cdot 0175\ 324$	$\cdot 0146\ 225$	$\cdot 0121\ 819$	$\cdot 0101\ 379$	$\cdot 0084\ 284$	$\cdot 0070\ 005$	$\cdot 0058\ 092$
$\cdot 81$	$\cdot 0238\ 442$	$\cdot 0201\ 285^+$	$\cdot 0169\ 732$	$\cdot 0142\ 976$	$\cdot 0120\ 318$	$\cdot 0101\ 156$	$\cdot 0084\ 969$
$\cdot 82$	$\cdot 0321\ 860$	$\cdot 0274\ 957$	$\cdot 0234\ 636$	$\cdot 0200\ 022$	$\cdot 0170\ 349$	$\cdot 0144\ 944$	$\cdot 0123\ 218$
$\cdot 83$	$\cdot 0431\ 145$	$\cdot 0372\ 656$	$\cdot 0321\ 762$	$\cdot 0277\ 540$	$\cdot 0239\ 167$	$\cdot 0205\ 912$	$\cdot 0177\ 128$
$\cdot 84$	$\cdot 0573\ 009$	$\cdot 0501\ 017$	$\cdot 0437\ 618$	$\cdot 0381\ 866$	$\cdot 0332\ 906$	$\cdot 0289\ 965$	$\cdot 0252\ 349$
$\cdot 85$	$\cdot 0755\ 390$	$\cdot 0668\ 012$	$\cdot 0590\ 147$	$\cdot 0520\ 860$	$\cdot 0459\ 289$	$\cdot 0404\ 644$	$\cdot 0356\ 205^+$
$\cdot 86$	$\cdot 0987\ 448$	$\cdot 0883\ 006$	$\cdot 0788\ 839$	$\cdot 0704\ 059$	$\cdot 0627\ 835$	$\cdot 0559\ 390$	$\cdot 0498\ 004$
$\cdot 87$	$\cdot 1279\ 448$	$\cdot 1156\ 693$	$\cdot 1044\ 728$	$\cdot 0942\ 753$	$\cdot 0850\ 002$	$\cdot 0765\ 748$	$\cdot 0689\ 306$
$\cdot 88$	$\cdot 1642\ 434$	$\cdot 1500\ 842$	$\cdot 1370\ 213$	$\cdot 1249\ 870$	$\cdot 1139\ 155$	$\cdot 1037\ 427$	$\cdot 0944\ 070$
$\cdot 89$	$\cdot 2087\ 636$	$\cdot 1927\ 759$	$\cdot 1778\ 584$	$\cdot 1639\ 594$	$\cdot 1510\ 271$	$\cdot 1390\ 095$	$\cdot 1278\ 555$
$\cdot 90$	$\cdot 2625\ 483$	$\cdot 2449\ 335$	$\cdot 2283\ 130$	$\cdot 2126\ 534$	$\cdot 1979\ 191$	$\cdot 1840\ 732$	$\cdot 1710\ 779$
$\cdot 91$	$\cdot 3264\ 087$	$\cdot 3075\ 526$	$\cdot 2895\ 633$	$\cdot 2724\ 256$	$\cdot 2561\ 215$	$\cdot 2406\ 302$	$\cdot 2259\ 280$
$\cdot 92$	$\cdot 4007\ 077$	$\cdot 3812\ 109$	$\cdot 3624\ 059$	$\cdot 3442\ 943$	$\cdot 3268\ 743$	$\cdot 3101\ 408$	$\cdot 2940\ 863$
$\cdot 93$	$\cdot 4850\ 636$	$\cdot 4657\ 512$	$\cdot 4469\ 215^+$	$\cdot 4285\ 891$	$\cdot 4107\ 650$	$\cdot 3934\ 572$	$\cdot 3766\ 712$
$\cdot 94$	$\cdot 5779\ 693$	$\cdot 5598\ 635$	$\cdot 5420\ 205$	$\cdot 5244\ 619$	$\cdot 5072\ 066$	$\cdot 4902\ 710$	$\cdot 4736\ 693$
$\cdot 95$	$\cdot 6763\ 375^+$	$\cdot 6605\ 709$	$\cdot 6448\ 679$	$\cdot 6292\ 508$	$\cdot 6137\ 402$	$\cdot 5983\ 550$	$\cdot 5831\ 127$
$\cdot 96$	$\cdot 7750\ 240$	$\cdot 7626\ 676$	$\cdot 7502\ 315$	$\cdot 7377\ 332$	$\cdot 7251\ 895^+$	$\cdot 7126\ 163$	$\cdot 7000\ 287$
$\cdot 97$	$\cdot 8664\ 652$	$\cdot 8582\ 511$	$\cdot 8498\ 979$	$\cdot 8414\ 155^+$	$\cdot 8328\ 136$	$\cdot 8241\ 016$	$\cdot 8152\ 888$
$\cdot 98$	$\cdot 9407\ 725$	$\cdot 9367\ 178$	$\cdot 9325\ 519$	$\cdot 9282\ 779$	$\cdot 9238\ 990$	$\cdot 9194\ 184$	$\cdot 9148\ 392$
$\cdot 99$	$\cdot 9871\ 671$	$\cdot 9861\ 951$	$\cdot 9851\ 863$	$\cdot 9841\ 408$	$\cdot 9830\ 586$	$\cdot 9819\ 400$	$\cdot 9807\ 851$
$\cdot 100$	$\cdot 10000\ 000$	$\cdot 10000\ 000$	$\cdot 10000\ 000$	$\cdot 10000\ 000$	$\cdot 10000\ 000$	$\cdot 10000\ 000$	$\cdot 10000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

 $x = .58 \text{ to } 1.00$ $q = 2.5$

$p = 37$ to 43

	$p = 37$	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$B(p, q) = 1518\ 8347 \times \frac{1}{10^8}$	$1422\ 7059 \times \frac{1}{10^8}$	$1334\ 8846 \times \frac{1}{10^8}$	$1254\ 4698 \times \frac{1}{10^8}$	$1180\ 6775 \times \frac{1}{10^8}$	$1112\ 8225 \times \frac{1}{10^8}$	$1050\ 3043 \times \frac{1}{10^8}$	
$\cdot 58$	0000 001	0000 001					
$\cdot 59$	0000 002	0000 001	0000 001				
$\cdot 60$	0000 003	0000 002	0000 001	0000 001			
$\cdot 61$	0000 005 ⁺	0000 003	0000 002	0000 001	0000 001		
$\cdot 62$	0000 006	0000 006	0000 004	0000 002	0000 002	0000 001	
$\cdot 63$	0000 016	0000 011	0000 007	0000 004	0000 003	0000 002	
$\cdot 64$	0000 028	0000 018	0000 012	0000 008	0000 005 ⁺	0000 004	
$\cdot 65$	0000 047	0000 032	0000 022	0000 014	0000 010	0000 007	
$\cdot 66$	0000 080	0000 055 ⁻	0000 038	0000 026	0000 018	0000 012	
$\cdot 67$	0000 134	0000 093	0000 065 ⁻	0000 045 ⁻	0000 031	0000 022	
$\cdot 68$	0000 222	0000 157	0000 110	0000 078	0000 055 ⁻	0000 038	
$\cdot 69$	0000 365 ⁺	0000 261	0000 187	0000 133	0000 095 ⁺	0000 068	
$\cdot 70$	0000 594	0000 431	0000 313	0000 227	0000 164	0000 119	
$\cdot 71$	0000 959	0000 706	0000 519	0000 382	0000 280	0000 206	
$\cdot 72$	0001 533	0001 145 ⁻	0000 854	0000 636	0000 474	0000 353	
$\cdot 73$	0002 431	0001 840	0001 391	0001 051	0000 794	0000 599	
$\cdot 74$	0003 820	0002 931	0002 246	0001 720	0001 316	0001 007	
$\cdot 75$	0005 954	0004 628	0003 595 ⁻	0002 790	0002 163	0001 676	
$\cdot 76$	0009 199	0007 245 ⁺	0005 701	0004 483	0003 523	0002 766	
$\cdot 77$	0014 094	0011 244	0008 964	0007 140	0005 683	0004 520	
$\cdot 78$	0021 411	0017 301	0013 968	0011 269	0009 085 ⁻	0007 319	
$\cdot 79$	0032 251	0026 389	0021 575 ⁻	0017 626	0014 389	0011 738	
$\cdot 80$	0048 164	0039 900	0033 028	0027 319	0022 580	0018 651	
$\cdot 81$	0071 311	0059 800	0050 108	0041 956	0035 105 ⁻	0029 352	
$\cdot 82$	0104 661	0088 828	0075 332	0063 839	0054 062	0045 751	
$\cdot 83$	0152 242	0130 748	0112 205 ⁻	0096 222	0082 458	0070 617	
$\cdot 84$	0219 435 ⁻	0190 666	0165 547	0143 634	0124 538	0107 910	
$\cdot 85$	0313 317	0275 384	0241 869	0212 285 ⁻	0186 195 ⁺	0163 208	
$\cdot 86$	0443 013	0393 803	0349 813	0310 525 ⁺	0275 471	0244 222	
$\cdot 87$	0620 030	0557 317	0500 603	0449 304	0403 115 ⁻	0361 405 ⁺	
$\cdot 88$	0858 493	0780 132	0708 452	0642 148	0583 143	0528 589	
$\cdot 89$	1175 147	1079 384	0990 790	0908 909	0833 302	0763 550 ⁺	
$\cdot 90$	1588 947	1474 854	1368 117	1268 358	1175 209	1088 307	
$\cdot 91$	2119 933	1987 978	1863 159	1745 205 ⁺	1633 842	1528 794	
$\cdot 92$	2787 006	2639 720	2498 868	2364 300	2235 854	2113 362	
$\cdot 93$	3604 097	3446 734	3294 610	3147 693	3005 937	2869 280	
$\cdot 94$	4574 134	4415 134	4259 775 ⁻	4108 120	3960 219	3816 105 ⁺	
$\cdot 95$	5680 291	5531 188	5383 949	5238 692	5095 523	4954 536	
$\cdot 96$	6874 411	6748 671	6623 195 ⁺	6498 106	6373 517	6249 536	
$\cdot 97$	8063 842	7973 966	7883 344	7792 061	7700 195 ⁺	7607 826	
$\cdot 98$	9101 647	9053 979	9005 420	8956 002	8905 757	8854 714	
$\cdot 99$	9795 942	9783 673	9771 048	9758 069	9744 737	9731 055 ⁺	
$\cdot 100$	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000	

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .63 \text{ to } 1.00$
$$q = 2.5$$
$$p = 4$$

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$B(p, q) = .9925\ 9531 \times \frac{1}{10^4}$		$.9392\ 2997 \times \frac{1}{10^4}$	$.8897\ 9681 \times \frac{1}{10^4}$	$.8439\ 3100 \times \frac{1}{10^4}$	$.8013\ 0822 \times \frac{1}{10^4}$	$.7616\ 3950 \times \frac{1}{10^4}$	$.7246\ 667$
$\frac{x}{\%}$							
.63	.0000 001	.0000 001					
.64	.0000 002	.0000 001	.0000 001				
.65	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001		
.66	.0000 006	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.67	.0000 010	.0000 007	.0000 005	.0000 003	.0000 002	.0000 002	.0000 001
.68	.0000 019	.0000 013	.0000 009	.0000 007	.0000 005	.0000 003	.0000 002
.69	.0000 035	.0000 025	.0000 018	.0000 012	.0000 009	.0000 006	.0000 004
.70	.0000 062	.0000 045	.0000 032	.0000 023	.0000 017	.0000 012	.0000 009
.71	.0000 111	.0000 081	.0000 059	.0000 043	.0000 032	.0000 023	.0000 017
.72	.0000 195	.0000 145	.0000 107	.0000 080	.0000 059	.0000 044	.0000 032
.73	.0000 340	.0000 256	.0000 193	.0000 145	.0000 109	.0000 082	.0000 061
.74	.0000 587	.0000 448	.0000 342	.0000 261	.0000 199	.0000 151	.0000 115
.75	.0001 005	.0000 777	.0000 601	.0000 464	.0000 358	.0000 276	.0000 213
.76	.0001 702	.0001 333	.0001 044	.0000 817	.0000 639	.0000 500	.0000 391
.77	.0002 854	.0002 265 ⁺	.0001 797	.0001 425 ⁺	.0001 129	.0000 894	.0000 708
.78	.0004 740	.0003 811	.0003 062	.0002 459	.0001 974	.0001 584	.0001 270
.79	.0007 797	.0006 348	.0005 166	.0004 201	.0003 415	.0002 774	.0002 253
.80	.0012 699	.0010 469	.0008 625 ⁺	.0007 103	.0005 808	.0004 808	.0003 953
.81	.0020 481	.0017 092	.0014 256	.0011 884	.0009 901	.0008 245 ⁺	.0006 862
.82	.0032 704	.0027 625	.0023 321	.0019 677	.0016 594	.0013 987	.0011 783
.83	.0051 694	.0044 189	.0037 752	.0032 236	.0027 511	.0023 467	.0020 007
.84	.0080 868	.0069 945	.0060 463	.0052 239	.0045 110	.0038 935	.0033 589
.85	.0125 169	.0109 522	.0095 778	.0083 716	.0073 135	.0063 860	.0055 736
.86	.0191 615 ⁺	.0169 585	.0150 007	.0132 621	.0117 191	.0103 508	.0091 379
.87	.0289 984	.0259 542	.0232 174	.0207 588	.0185 515	.0165 711	.0147 955
.88	.0433 585	.0392 378	.0354 908	.0320 859	.0289 939	.0261 879	.0236 431
.89	.0640 034	.0585 531	.0535 407	.0489 342	.0447 035 ⁺	.0408 206	.0372 590
.90	.0931 855 ⁺	.0861 638	.0796 335 ⁺	.0735 647	.0679 284	.0626 972	.0578 450
.91	.1336 546	.1248 805 ⁺	.1166 299	.1088 771	.1015 968	.0947 647	.0883 572
.92	.1885 517	.1779 795 ⁺	.1679 289	.1583 808	.1493 162	.1407 162	.1325 620
.93	.2610 964	.2489 130	.2372 047	.2259 609	.2151 705 ⁺	.2048 218	.1949 029
.94	.3539 313	.3406 641	.3277 772	.3152 686	.3031 352	.2913 734	.2799 788
.95	.4679 434	.4545 454	.4413 931	.4284 910	.4158 427	.4034 514	.3913 193
.96	.6003 794	.5882 214	.5761 608	.5642 050 ⁺	.5523 611	.5406 357	.5290 347
.97	.7421 873	.7328 432	.7234 774	.7140 963	.7047 062	.6953 132	.6859 230
.98	.8750 364	.8697 117	.8643 193	.8588 625	.8533 441	.8477 672	.8421 344
.99	.9702 655	.9687 941	.9672 889	.9657 501	.9641 781	.9625 732	.9609 357
I .00	I .0000 000	I .0000 000	I .0000 000	I .0000 000	I .0000 000	I .0000 000	I .0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .01$ to $.60$ $q = 3$ $p = 3$ to 5

	$p = 3$	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$
$B(p, q) = .3333\ 3333 \times \frac{x}{10}$	$.2308\ 8023 \times \frac{x}{10}$	$.1666\ 6667 \times \frac{x}{10}$	$.1243\ 2012 \times \frac{x}{10}$	$.0923\ 8005 \times \frac{x}{10}$	$.07450\ 2015 \times \frac{x}{10}$	
x						
.01	.0000 099	.0000 012	.0000 001			
.02	.0000 776	.0000 136	.0000 023	.0000 004	.0000 001	
.03	.0002 580	.0000 552	.0000 110	.0000 024	.0000 005	.0000 001
.04	.0006 022	.0001 487	.0000 360	.0000 080	.0000 020	.0000 005
.05	.0011 581	.0003 195 ⁺	.0000 864	.0000 230	.0000 060	.0000 016
.06	.0019 703	.0005 951	.0001 762	.0000 513	.0000 147	.0000 042
.07	.0030 799	.0010 042	.0003 210	.0001 009	.0000 313	.0000 096
.08	.0045 253	.0015 764	.0005 384	.0001 809	.0000 600	.0000 176
.09	.0063 413	.0023 415 ⁻	.0008 477	.0003 020	.0001 061	.0000 319
.10	.0085 600 ⁰	.0033 295 ⁻	.0012 700 ⁰	.0004 767	.0001 765 ⁰	.0000 616
.11	.0112 105 ⁻	.0045 702	.0018 273	.0007 190	.0002 791	.0001 074
.12	.0143 189	.0060 928	.0025 431	.0010 447	.0004 234	.0001 802
.13	.0179 086	.0079 258	.0034 413	.0014 707	.0006 202	.0002 596
.14	.0220 003	.0100 970	.0045 460	.0020 156	.0008 817	.0003 814
.15	.0266 110	.0126 330	.0058 852	.0026 091	.0012 216	.0005 392
.16	.0317 587	.0155 592	.0074 816	.0033 420	.0016 951	.0007 692
.17	.0374 538	.0188 998	.0093 610	.0043 663	.0021 684	.0010 196
.18	.0437 073	.0226 774	.0115 516	.0056 048	.0028 695	.0013 954
.19	.0505 275 ⁺	.0269 133	.0140 760	.0072 303	.0036 854	.0018 515
.20	.0579 200 ⁰	.0316 269	.0169 600 ⁰	.0089 586	.0046 720 ⁰	.0024 009
.21	.0658 883	.0368 364	.0202 280	.0109 427	.0058 450	.0030 882
.22	.0744 338	.0425 576	.0239 035 ⁻	.0134 279	.0072 285 ⁻	.0040 075 ⁺
.23	.0835 557	.0488 052	.0280 093	.0168 393	.0088 458	.0050 884
.24	.0932 512	.0555 915 ⁺	.0325 671	.0188 010	.0107 209	.0060 481
.25	.1035 156	.0629 272	.0375 977	.0221 405 ⁺	.0128 784	.0074 120
.26	.1143 424	.0708 212	.0431 203	.0258 297	.0153 430	.0090 017
.27	.1257 232	.0792 800	.0491 530	.0300 436	.0181 420	.0108 411
.28	.1376 478	.0883 088	.0557 124	.0346 555 ⁺	.0212 996	.0129 595
.29	.1501 045 ⁺	.0979 103	.0628 136	.0397 481	.0248 321	.0154 106
.30	.1630 800 ⁰	.1080 855 ⁺	.0704 700 ⁰	.0453 138	.0287 255 ⁰	.0181 126
.31	.1765 593	.1188 335 ⁺	.0786 932	.0513 027	.0331 895	.0212 682
.32	.1905 263	.1301 513	.0874 932	.0580 245 ⁺	.0380 474	.0246 079
.33	.2049 631	.1420 341	.0968 779	.0651 075	.0434 792	.0283 520
.34	.2198 509	.1544 752	.1068 534	.0729 381	.0492 247	.0325 929
.35	.2351 694	.1674 658	.1174 230	.0812 695 ⁺	.0554 079 ⁺	.0373 300
.36	.2508 973	.1809 954	.1285 914	.0900 811	.0620 462	.0425 640
.37	.2670 122	.1950 518	.1403 550	.0992 124	.0690 617	.0482 951
.38	.2834 907	.2096 209	.1527 154	.1098 594	.0764 234	.0545 235
.39	.3003 084	.2246 868	.1656 695 ⁺	.1209 454	.0840 813	.0612 499
.40	.3174 400 ⁰	.2402 319	.1792 000 ⁰	.1329 365	.0920 500 ⁰	.0684 745
.41	.3348 596	.2562 371	.1933 193	.1449 754	.1002 975 ⁺	.0760 985
.42	.3525 403	.2726 816	.2079 858	.1567 600 ⁺	.1088 165	.0849 182
.43	.3704 540	.2895 431	.2232 135 ⁺	.1682 592	.1186 428	.0945 349
.44	.3885 753	.3067 978	.2389 786	.1800 991	.1292 448	.1049 515
.45	.4068 731	.3244 205 ⁻	.2552 639	.1928 635 ⁺	.1402 277	.1160 595
.46	.4253 194	.3423 846	.2720 592	.2137 438	.1519 045 ⁺	.1279 693
.47	.4438 840	.3606 624	.2893 163	.2249 284	.1640 434	.1405 810
.48	.4625 400	.3792 249	.3070 388	.2359 046	.1766 995	.1539 955
.49	.4812 550 ⁻	.3980 420	.3251 624	.2468 528	.1899 663	.1682 129
.50	.5000 000 ⁰	.4170 825 ⁺	.3437 500 ⁰	.2583 568	.2039 625 ⁰	.1832 343
.51	.5187 450 ⁺	.4363 144	.3626 824	.2698 1038	.2182 046	.1989 623
.52	.5374 600	.4557 046	.3819 588	.2810 394	.2330 609	.2152 884
.53	.5561 151	.4752 105 ⁺	.4015 466	.2920 666	.2480 639	.2320 609
.54	.5746 806	.4948 247	.4214 115 ⁻	.3028 459	.2632 644	.2493 603
.55	.5931 269	.5144 852	.4415 177	.3133 452	.2786 401	.2670 601
.56	.6114 247	.5341 656	.4618 279	.3235 600	.2942 602	.2851 602
.57	.6295 451	.5538 299	.4823 937	.3330 645	.3100 123	.3036 602
.58	.6474 597	.5734 422	.5020 951	.3427 694	.3259 426	.3220 212
.59	.6651 404	.5929 660	.5235 912	.3524 175 ⁺	.3420 201	.3400 523
.60	.6825 600 ⁰	.6123 651	.5443 200 ⁰	.3608 543	.3583 030 ⁰	.3583 030 ⁰

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 3$ $p = 3$ to 5.5

p	3	3.5	4	4.5	5	5.5
$I_{\infty}(p, q)$	.3333 3333 $\times 10^1$	.2308 8023 $\times 10^1$	.1666 6667 $\times 10^1$	.1243 2012 $\times 10^1$	.0523 8005 $\times 10^1$	.7459 2075 $\times 10^1$
.61	.6096 916	.6316 032	.5650 488	.5014 684	.4418 500	.3868 052
.62	.7105 003	.6506 442	.5857 340	.5232 156	.4641 120	.4090 962
.63	.7329 878	.6694 521	.6003 315	.5450 459	.4866 413	.4318 361
.64	.7491 027	.6879 617	.6207 068	.5660 688	.5093 831	.4549 745
.65	.7648 306	.7062 279	.6470 852	.5887 528	.5342 833	.4784 566
.66	.7801 401	.7241 266	.6671 517	.6105 247	.5552 843	.5022 241
.67	.7950 369	.7416 512	.6869 517	.6321 707	.5783 261	.5262 150
.68	.8094 737	.7587 783	.7064 407	.6536 362	.6013 469	.5503 634
.69	.8234 497	.7754 672	.7235 745 [†]	.6748 662	.6242 831	.5746 006
.70	.8369 200 [*]	.7916 906	.7443 100 [*]	.6958 053	.6470 605 [*]	.5988 546
.71	.8498 955	.8074 195	.7626 045 [†]	.7163 981	.6696 397	.6230 506
.72	.8624 522	.8226 263	.7804 168	.7369 807	.6919 265 [†]	.6471 117
.73	.8742 768	.8372 849	.7977 666	.7563 257	.7148 622	.6699 586
.74	.8856 576	.8514 711	.8144 354	.7755 524	.7353 788	.6945 107
.75	.8964 844	.8648 625 [†]	.8305 664	.7942 178	.7563 687	.7176 866
.76	.9067 488	.8777 387	.8460 698	.8122 711	.7768 850	.7404 922
.77	.9164 443	.8899 815 [*]	.8608 080	.8296 636	.7967 419	.7623 766
.78	.9255 662	.9015 749	.8750 359	.8463 488	.8150 155 [*]	.7841 274
.79	.9341 117	.9125 055 [†]	.8884 513	.8622 831	.8343 448	.8049 737
.80	.9420 800 [*]	.9227 626	.9011 200 [*]	.8774 259	.8519 680 [*]	.8250 368
.81	.9494 725	.9324 382	.9130 210	.8917 403	.8687 321	.8442 407
.82	.9562 927	.9412 279	.9241 369	.9051 941	.8845 854	.8625 130
.83	.9625 592	.9494 273	.9344 513	.9177 560	.8994 209	.8807 857
.84	.9682 813	.9569 492	.9449 631	.9294 054	.9144 739	.8985 964
.85	.9734 591	.9647 205 [†]	.9546 614	.9401 240	.9282 448	.9160 801
.86	.9780 927	.9709 265 [†]	.9645 363	.9498 969	.9406 315	.9290 156
.87	.9820 914	.9764 294	.9697 211	.9587 213	.9487 442	.9417 391
.88	.9854 811	.9804 680	.9749 054	.9665 927	.9583 612	.9512 212
.89	.9883 705 [†]	.9834 805 [†]	.9794 074	.9745 451	.9668 709	.9594 926
.90	.9914 400 [*]	.9881 001	.9841 500 [*]	.9798 510	.9743 685 [*]	.9684 250 [†]
.91	.9946 957	.9911 564	.9881 652	.9846 213	.9806 665 [†]	.9761 470
.92	.9984 747	.9946 617	.9914 859	.9886 319	.9856 800	.9826 442
.93	.9999 201	.9976 209	.9951 611	.9923 283	.9904 124	.9889 554
.94	.9999 202	.9997 108	.9992 357	.9990 673	.9997 060	.9994 447
.95	.9998 419	.9994 505	.9997 202	.9999 668	.9992 439	.9995 930
.96	.9999 128	.9994 416	.9998 316	.9998 971	.9998 162	.9995 051
.97	.9997 429	.9996 317	.9999 256	.9994 314	.9993 370	.9996 166
.98	.9999 224	.9998 888	.9998 471	.9997 965 [†]	.9997 363	.9996 660
.99	.9999 991	.9999 858	.9999 804	.9999 739	.9999 660	.9999 568
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .04$ to $.60$ $q = 3$ $p = 6$ to 8.5

	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$
$B(p, q) = .5952\ 3810 \times \frac{x}{10^3}$	$.4826\ 5460 \times \frac{x}{10^3}$	$.3968\ 2540 \times \frac{x}{10^3}$	$.3302\ 3736 \times \frac{x}{10^3}$	$.2777\ 7778 \times \frac{x}{10^3}$	$.2358\ 8383 \times \frac{x}{10^3}$	
x						
.04	.0000 001					
.05	.0000 004	.0000 001				
.06	.0000 012	.0000 003	.0000 001			
.07	.0000 029	.0000 009	.0000 003	.0000 001		
.08	.0000 064	.0000 020	.0000 007	.0000 002	.0000 001	
.09	.0000 127	.0000 043	.0000 015	.0000 005	.0000 002	.0000 001
.10	.0000 234	.0000 084	.0000 030	.0000 011	.0000 004	.0000 001
.11	.0000 407	.0000 153	.0000 057	.0000 021	.0000 008	.0000 003
.12	.0000 673	.0000 265	.0000 103	.0000 040	.0000 015	.0000 006
.13	.0001 067	.0000 437	.0000 177	.0000 072	.0000 029	.0000 011
.14	.0001 633	.0000 694	.0000 292	.0000 122	.0000 051	.0000 021
.15	.0002 423	.0001 065	.0000 464	.0000 201	.0000 087	.0000 037
.16	.0003 499	.0001 588	.0000 715	.0000 320	.0000 142	.0000 063
.17	.0004 935	.0002 308	.0001 071	.0000 494	.0000 226	.0000 103
.18	.0006 816	.0003 278	.0001 565	.0000 742	.0000 350	.0000 164
.19	.0009 239	.0004 564	.0002 238	.0001 090	.0000 528	.0000 254
.20	.0012 314	.0006 240	.0003 139	.0001 568	.0000 779	.0000 385
.21	.0016 164	.0008 390	.0004 323	.0002 213	.0001 127	.0000 570
.22	.0020 926	.0011 114	.0005 861	.0003 070	.0001 599	.0000 829
.23	.0026 751	.0014 524	.0007 828	.0004 192	.0002 232	.0001 182
.24	.0033 805	.0018 742	.0010 316	.0005 642	.0003 068	.0001 660
.25	.0042 267	.0023 909	.0013 428	.0007 493	.0004 158	.0002 295
.26	.0052 329	.0030 177	.0017 279	.0009 831	.0005 562	.0003 130
.27	.0064 199	.0037 714	.0021 999	.0012 752	.0007 350	.0004 215
.28	.0078 097	.0046 704	.0027 735	.0016 367	.0009 605	.0005 608
.29	.0094 256	.0057 345	.0034 646	.0020 802	.0012 420	.0007 378
.30	.0112 922	.0069 851	.0042 909	.0026 196	.0015 904	.0009 607
.31	.0134 351	.0084 448	.0052 716	.0032 706	.0020 179	.0012 388
.32	.0158 811	.0101 381	.0064 277	.0040 504	.0025 384	.0015 829
.33	.0186 577	.0120 906	.0077 818	.0049 782	.0031 673	.0020 052
.34	.0217 935	.0143 292	.0093 580	.0060 746	.0039 219	.0025 196
.35	.0253 175	.0168 822	.0111 822	.0073 623	.0048 213	.0031 419
.36	.0292 594	.0197 791	.0132 818	.0088 658	.0058 864	.0038 893
.37	.0336 492	.0230 502	.0156 858	.0106 113	.0071 403	.0047 816
.38	.0385 171	.0267 269	.0184 246	.0126 269	.0086 079	.0058 401
.39	.0438 932	.0308 411	.0215 299	.0149 425	.0103 163	.0070 886
.40	.0498 074	.0354 256	.0250 348	.0175 898	.0122 946	.0085 529
.41	.0562 892	.0405 133	.0289 732	.0206 019	.0145 738	.0102 612
.42	.0633 676	.0461 373	.0333 803	.0240 137	.0171 871	.0122 440
.43	.0710 705	.0523 308	.0382 916	.0278 616	.0201 696	.0145 340
.44	.0794 247	.0591 265	.0437 436	.0321 828	.0235 583	.0171 662
.45	.0884 559	.0665 568	.0497 728	.0370 162	.0273 918	.0201 780
.46	.0981 878	.0746 531	.0564 157	.0424 011	.0317 105	.0236 089
.47	.1086 426	.0834 458	.0637 089	.0483 776	.0365 560	.0275 003
.48	.1198 402	.0929 639	.0716 881	.0549 862	.0419 713	.0318 958
.49	.1317 981	.1032 346	.0803 884	.0622 675	.0480 003	.0368 406
.50	.1445 312	.1142 834	.0898 437	.0702 618	.0546 875	.0423 815
.51	.1580 516	.1261 331	.1000 864	.0790 088	.0620 778	.0485 665
.52	.1723 681	.1388 041	.1111 469	.0885 472	.0702 161	.0554 447
.53	.1874 861	.1523 138	.1230 533	.0989 143	.0791 470	.0630 655
.54	.2034 075	.1666 763	.1358 313	.1101 457	.0889 141	.0714 788
.55	.2201 393	.1819 019	.1495 031	.1222 746	.0995 597	.0807 342
.56	.2376 483	.1979 971	.1640 878	.1353 313	.1111 243	.0908 804
.57	.2559 510	.2149 641	.1796 003	.1493 433	.1236 462	.1019 650
.58	.2750 235	.2328 005	.1960 513	.1643 337	.1371 607	.1140 335
.59	.2948 461	.2514 990	.2134 467	.1803 219	.1516 993	.1271 290
.60	.3153 946	.2710 469	.2317 870	.1973 221	.1672 898	.1412 913

TABLE I. THE $I_w(p, q)$ FUNCTION

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 $x = .61$ to 1.00 $q = 3$ $p = 6$ to 8.5

	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$
$B(p, q) = .5952\ 3810 \times \frac{1}{10^8}$	$.4826\ 5460 \times \frac{1}{10^8}$	$.3968\ 2540 \times \frac{1}{10^8}$	$.3302\ 3736 \times \frac{1}{10^8}$	$.2777\ 7778 \times \frac{1}{10^8}$	$.2358\ 8383 \times \frac{1}{10^8}$	
$\cdot 61$	.3366 393	.2914 263	.2510 674	.2153 432	.1839 547	.1565 564
$\cdot 62$	.3585 458	.3126 134	.2712 770	.2343 882	.2017 113	.1729 553
$\cdot 63$	.3810 745 ⁻	.3345 787	.2923 984	.2544 535 ⁺	.2205 708	.1905 137
$\cdot 64$	.4041 805 ⁻	.3572 863	.3144 075 ⁺	.2755 288	.2405 373	.2092 507
$\cdot 65$	.4278 137	.3806 941	.3372 733	.2975 960	.2616 074	.2291 786
$\cdot 66$	.4519 187	.4047 537	.3609 571	.3206 292	.2837 696	.2503 011
$\cdot 67$	.4764 353	.4294 099	.3854 128	.3445 939	.3070 034	.2726 133
$\cdot 68$	.5012 977	.4546 013	.4105 864	.3694 467	.3312 788	.2961 002
$\cdot 69$	.5264 356	.4802 598	.4364 159	.3951 353	.3565 555 ⁺	.3207 365 ⁺
$\cdot 70$	.5517 738	.5063 107	.4628 312	.4215 975 ⁻	.3827 828	.3464 851
$\cdot 71$	.5772 327	.5326 733	.4897 540	.4487 614	.4098 985 ⁺	.3732 967
$\cdot 72$	.6027 284	.5592 605 ⁺	.5170 982	.4765 453	.4378 290	.4011 090
$\cdot 73$	.6281 732	.5859 796	.5447 693	.5048 573	.4664 888	.4298 463
$\cdot 74$	.6534 761	.6127 322	.5726 655 ⁺	.5335 958	.4957 800	.4594 186
$\cdot 75$	.6785 431	.6394 149	.6006 775 ⁻	.5626 490	.5255 928	.4897 214
$\cdot 76$	.7032 777	.6659 199	.6286 889	.5918 960	.5558 051	.5206 356
$\cdot 77$	.7275 817	.6921 354	.6565 772	.6212 065 ⁻	.5862 827	.5520 271
$\cdot 78$	.7513 559	.7179 404	.6842 140	.6504 419	.6168 803	.5837 474
$\cdot 79$	.7745 009	.7432 358	.7114 664	.6794 559	.6474 414	.6156 334
$\cdot 80$	.7969 178	.7678 851	.7381 975 ⁺	.7080 955 ⁺	.6777 995 ⁺	.6475 088
$\cdot 81$	.8185 090	.7917 753	.7642 679	.7362 023	.7077 796	.6791 845 ⁻
$\cdot 82$	.8391 800	.8147 888	.7895 369	.7636 138	.7371 990	.7104 601
$\cdot 83$	.8588 397	.8368 102	.8138 644	.7901 653	.7658 695 ⁻	.7411 259
$\cdot 84$	.8774 020	.8577 280	.8371 123	.8156 916	.7935 995 ⁻	.7709 649
$\cdot 85$	.8947 872	.8774 362	.8591 466	.8400 298	.8201 965 ⁻	.7997 554
$\cdot 86$	.9109 236	.8958 366	.8798 399	.8630 214	.8454 702	.8272 748
$\cdot 87$	.9257 486	.9128 400	.8990 736	.8845 160	.8692 358	.8533 029
$\cdot 88$	.9392 108	.9283 694	.9167 411	.9043 738	.8913 182	.8776 267
$\cdot 89$	.9512 719	.9423 616	.9327 504	.9224 703	.9115 565 ⁺	.9000 462
$\cdot 90$	.9619 082	.9547 704	.9470 279	.9387 000	.9298 092	.9203 798
$\cdot 91$	.9711 132	.9655 691	.9595 219	.9529 814	.9459 600	.9384 720
$\cdot 92$	.9788 995 ⁺	.9747 537	.9702 068	.9652 621	.9599 246	.9542 011
$\cdot 93$	.9853 013	.9823 462	.9790 877	.9755 247	.9716 579	.9674 889
$\cdot 94$	.9903 771	.9883 984	.9862 047	.9837 933	.9811 622	.9783 102
$\cdot 95$	.9942 118	.9929 950 ⁺	.9916 390	.9901 403	.9884 964	.9867 051
$\cdot 96$	.9969 203	.9962 588	.9955 176	.9946 942	.9937 863	.9927 917
$\cdot 97$	.9986 501	.9983 540	.9980 204	.9976 479	.9972 350 ⁺	.9967 804
$\cdot 98$	.9995 845 ⁺	.9994 915 ⁻	.9993 861	.9992 679	.9991 361	.9989 903
$\cdot 99$	.9999 461	.9999 337	.9999 197	.9999 039	.9998 862	.9998 664
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .11$ to $.70$ $q = 3$ $p = 9$ to 12

	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$
$B(p, q) = .2020\ 2020 \times \frac{1}{10^8}$	$.1743\ 4892 \times \frac{1}{10^8}$	$.1515\ 1515 \times \frac{1}{10^8}$	$.1325\ 0518 \times \frac{1}{10^8}$	$.1165\ 5012 \times \frac{1}{10^8}$	$.9157\ 5092 \times \frac{1}{10^8}$	
$\cdot 11$	.0000 001					
$\cdot 12$	.0000 002	.0000 001				
$\cdot 13$	.0000 005 ⁻	.0000 002	.0000 001			
$\cdot 14$	.0000 009	.0000 004	.0000 001	.0000 001		
$\cdot 15$	.0000 016	.0000 007	.0000 003	.0000 001	.0000 001	
$\cdot 16$	.0000 028	.0000 012	.0000 005 ⁺	.0000 002	.0000 001	
$\cdot 17$	.0000 047	.0000 021	.0000 010	.0000 004	.0000 002	
$\cdot 18$	.0000 077	.0000 036	.0000 016	.0000 008	.0000 003	.0000 001
$\cdot 19$	.0000 122	.0000 058	.0000 028	.0000 013	.0000 006	.0000 001
$\cdot 20$	.0000 189	.0000 093	.0000 045 ⁺	.0000 022	.0000 011	.0000 002
$\cdot 21$	.0000 287	.0000 144	.0000 072	.0000 036	.0000 018	.0000 004
$\cdot 22$	.0000 427	.0000 219	.0000 112	.0000 057	.0000 029	.0000 007
$\cdot 23$	.0000 623	.0000 327	.0000 171	.0000 089	.0000 046	.0000 012
$\cdot 24$	.0000 894	.0000 479	.0000 256	.0000 136	.0000 072	.0000 020
$\cdot 25$	.0001 261	.0000 690	.0000 376	.0000 204	.0000 111	.0000 032
$\cdot 26$	.0001 754	.0000 978	.0000 544	.0000 301	.0000 166	.0000 050 ⁺
$\cdot 27$	.0002 406	.0001 368	.0000 774	.0000 437	.0000 246	.0000 077
$\cdot 28$	.0003 259	.0001 886	.0001 087	.0000 625 ⁻	.0000 358	.0000 116
$\cdot 29$	.0004 363	.0002 569	.0001 507	.0000 881	.0000 513	.0000 173
$\cdot 30$	.0005 777	.0003 459	.0002 064	.0001 227	.0000 727	.0000 253
$\cdot 31$	.0007 571	.0004 608	.0002 794	.0001 688	.0001 017	.0000 366
$\cdot 32$	.0009 826	.0006 075 ⁻	.0003 742	.0002 297	.0001 405 ⁺	.0000 521
$\cdot 33$	.0012 638	.0007 933	.0004 961	.0003 091	.0001 920	.0000 735 ⁻
$\cdot 34$	.0016 116	.0010 266	.0006 515 ⁻	.0004 120	.0002 598	.0001 024
$\cdot 35$	.0020 384	.0013 171	.0008 479	.0005 440	.0003 479	.0001 411
$\cdot 36$	.0025 585 ⁻	.0016 763	.0010 942	.0007 118	.0004 616	.0001 925 ⁺
$\cdot 37$	.0031 880	.0021 171	.0014 007	.0009 236	.0006 072	.0002 601
$\cdot 38$	.0039 450 ⁺	.0026 543	.0017 794	.0011 888	.0007 918	.0003 483
$\cdot 39$	.0048 497	.0033 048	.0022 439	.0015 185 ⁺	.0010 245 ⁻	.0004 624
$\cdot 40$	.0059 245 ⁻	.0040 877	.0028 102	.0019 255 ⁺	.0013 153	.0006 087
$\cdot 41$	.0071 941	.0050 240	.0034 960	.0024 247	.0016 766	.0007 950 ⁻
$\cdot 42$	.0086 857	.0061 376	.0043 216	.0030 330	.0021 221	.0010 304
$\cdot 43$	.0104 290	.0074 547	.0053 098	.0037 698	.0026 683	.0013 259
$\cdot 44$	.0124 564	.0090 043	.0064 860	.0046 570	.0033 337	.0016 945 ⁻
$\cdot 45$	.0148 026	.0108 180	.0078 785 ⁻	.0057 192	.0041 394	.0021 510
$\cdot 46$	.0175 050 ⁺	.0129 305 ⁻	.0095 184	.0069 843	.0051 097	.0027 130
$\cdot 47$	.0206 038	.0153 792	.0114 400	.0084 829	.0062 717	.0034 009
$\cdot 48$	.0241 413	.0182 045 ⁺	.0136 810	.0102 492	.0076 559	.0042 380
$\cdot 49$	.0281 626	.0214 499	.0162 820	.0123 207	.0092 962	.0052 508
$\cdot 50$	.0327 148	.0251 613	.0192 871	.0147 386	.0112 305 ⁻	.0064 697
$\cdot 51$	.0378 473	.0293 879	.0227 437	.0175 476	.0135 002	.0079 289
$\cdot 52$	.0436 112	.0341 812	.0267 022	.0207 963	.0161 510	.0096 669
$\cdot 53$	.0500 591	.0395 950 ⁺	.0312 165 ⁺	.0245 369	.0192 327	.0117 264
$\cdot 54$	.0572 449	.0456 857	.0363 433	.0288 252	.0227 991	.0141 554
$\cdot 55$	.0652 235 ⁺	.0525 112	.0421 420	.0337 206	.0269 082	.0170 062
$\cdot 56$	.0740 499	.0601 308	.0486 745 ⁻	.0392 859	.0316 222	.0203 367
$\cdot 57$	.0837 790	.0686 051	.0560 047	.0455 868	.0370 072	.0242 097
$\cdot 58$	.0944 650 ⁻	.0779 948	.0641 984	.0526 919	.0431 329	.0286 935 ⁺
$\cdot 59$	.1061 607	.0883 607	.0733 223	.0606 720	.0500 726	.0338 613
$\cdot 60$	.1189 168	.0997 626	.0834 433	.0695 996	.0579 024	.0397 916
$\cdot 61$	.1327 812	.1122 588	.0946 285 ⁺	.0795 485 ⁻	.0667 007	.0465 674
$\cdot 62$	.1477 979	.1259 049	.1069 435 ⁺	.0905 924	.0765 479	.0542 761
$\cdot 63$	.1640 065 ⁺	.1407 534	.1204 520	.1028 046	.0875 249	.0630 091
$\cdot 64$	.1814 410	.1568 521	.1352 146	.1162 569	.0997 128	.0728 604
$\cdot 65$	.2001 289	.1742 434	.1512 876	.1310 181	.1131 914	.0839 266
$\cdot 66$	.2200 899	.1929 630	.1687 217	.1471 529	.1280 380	.0963 048
$\cdot 67$	.2413 356	.2130 387	.1875 609	.1647 207	.1443 261	.1100 919
$\cdot 68$	.2638 673	.2344 892	.2078 409	.1837 736	.1621 233	.1253 830
$\cdot 69$	.2876 760	.2573 225 ⁺	.2295 875 ⁺	.2043 551	.1814 903	.1422 692
$\cdot 70$	.3127 405 ⁻	.2815 350 ⁻	.2528 153	.2264 983	.2024 783	.1608 358

$x = .20$ to $.80$ $q = 3$ $p = 13$

	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$B(p, q) = .7326\ 0073 \times \frac{1}{10^8}$	$.5952\ 3810 \times \frac{1}{10^8}$	$.4901\ 9608 \times \frac{1}{10^8}$	$.4084\ 9673 \times \frac{1}{10^8}$	$.3439\ 9725 \times \frac{1}{10^8}$	$.2923\ 9760 \times \frac{1}{10^8}$	
x						
.20	.0000 001					
.21	.0000 001					
.22	.0000 002					
.23	.0000 003	.0000 001				
.24	.0000 006	.0000 002				
.25	.0000 009	.0000 003	.0000 001			
.26	.0000 015 ⁻	.0000 004	.0000 001			
.27	.0000 024	.0000 007	.0000 002	.0000 001		
.28	.0000 037	.0000 012	.0000 004	.0000 001		
.29	.0000 058	.0000 019	.0000 006	.0000 002	.0000 001	
.30	.0000 087	.0000 030	.0000 010	.0000 003	.0000 001	
.31	.0000 130	.0000 046	.0000 016	.0000 006	.0000 002	.0000 001
.32	.0000 192	.0000 070	.0000 025 ⁺	.0000 009	.0000 003	.0000 001
.33	.0000 278	.0000 104	.0000 039	.0000 014	.0000 005 ⁺	.0000 002
.34	.0000 399	.0000 154	.0000 059	.0000 023	.0000 009	.0000 003
.35	.0000 566	.0000 225 ⁺	.0000 089	.0000 035 ⁻	.0000 014	.0000 005 ⁺
.36	.0000 795 ⁻	.0000 325 ⁺	.0000 132	.0000 053	.0000 021	.0000 009
.37	.0001 104	.0000 464	.0000 194	.0000 080	.0000 033	.0000 014
.38	.0001 517	.0000 655 ⁺	.0000 281	.0000 119	.0000 051	.0000 021
.39	.0002 066	.0000 915 ⁺	.0000 403	.0000 176	.0000 076	.0000 033
.40	.0002 789	.0001 267	.0000 571	.0000 256	.0000 114	.0000 050 ⁺
.41	.0003 733	.0001 738	.0000 803	.0000 368	.0000 168	.0000 076
.42	.0004 954	.0002 362	.0001 118	.0000 525 ⁺	.0000 245 ⁺	.0000 114
.43	.0006 525 ⁺	.0003 184	.0001 542	.0000 742	.0000 355 ⁻	.0000 160
.44	.0008 530	.0004 258	.0002 110	.0001 038	.0000 508	.0000 247
.45	.0011 070	.0005 650 ⁻	.0002 862	.0001 440	.0000 721	.0000 350
.46	.0014 268	.0007 441	.0003 852	.0001 981	.0001 013	.0000 515 ⁺
.47	.0018 268	.0009 731	.0005 146	.0002 703	.0001 412	.0000 734 ⁺
.48	.0023 240	.0012 639	.0006 824	.0003 660	.0001 952	.0001 035 ⁺
.49	.0029 382	.0016 307	.0008 985 ⁻	.0004 918	.0002 677	.0001 440
.50	.0036 926	.0020 905 ⁻	.0011 749	.0006 561	.0003 643	.0002 012
.51	.0046 140	.0026 633	.0015 263	.0008 692	.0004 921	.0002 772
.52	.0057 331	.0033 729	.0019 702	.0011 436	.0006 600	.0003 790
.53	.0070 851	.0042 467	.0025 275 ⁻	.0014 948	.0008 790	.0005 143
.54	.0087 098	.0053 169	.0032 229	.0019 414	.0011 629	.0006 931
.55	.0106 524	.0066 202	.0040 857	.0025 059	.0015 283	.0009 274
.56	.0129 635 ⁻	.0081 993	.0051 502	.0032 150 ⁺	.0019 959	.0012 328
.57	.0156 994	.0101 023	.0064 561	.0041 007	.0025 903	.0016 281
.58	.0189 228	.0123 840	.0080 496	.0052 006	.0033 415 ⁺	.0021 364
.59	.0227 025 ⁺	.0151 060	.0099 837	.0065 586	.0042 853	.0027 861
.60	.0271 140	.0183 372	.0123 188	.0082 264	.0054 639	.0036 115
.61	.0322 391	.0221 542	.0151 236	.0102 631	.0069 276	.0046 536
.62	.0381 662	.0266 415 ⁻	.0184 754	.0127 373	.0087 350 ⁺	.0059 617
.63	.0449 900	.0318 915 ⁻	.0224 606	.0157 269	.0109 544	.0075 940
.64	.0528 107	.0380 048	.0271 753	.0193 203	.0136 647	.0096 192
.65	.0617 341	.0450 897	.0327 254	.0236 169	.0169 564	.0121 177
.66	.0718 702	.0532 623	.0392 266	.0287 279	.0209 326	.0151 825
.67	.0833 323	.0626 450 ⁻	.0468 044	.0347 762	.0257 099	.0189 208
.68	.0962 358	.0733 663	.0555 935 ⁺	.0418 966	.0314 185 ⁻	.0234 551
.69	.1106 963	.0855 593	.0657 370	.0502 360	.0382 033	.0289 240
.70	.1268 277	.0993 597	.0773 853	.0599 522	.0462 237	.0354 831
.71	.1447 400	.1149 039	.0906 940	.0712 132	.0556 528	.0433 053
.72	.1645 361	.1323 265 ⁻	.1058 225 ⁺	.0841 953	.0666 773	.0525 804
.73	.1863 092	.1517 569	.1229 303	.0990 812	.0794 950 ⁺	.0635 151
.74	.2101 390	.1733 158	.1421 739	.1160 562	.0943 132	.0763 305 ⁺
.75	.2360 878	.1971 111	.1637 024	.1353 050 ⁺	.1113 448	.0912 604
.76	.2641 963	.2232 326	.1876 526	.1570 064	.1308 039	.1085 472
.77	.2944 791	.2517 472	.2141 432	.1813 273	.1529 006	.1284 360
.78	.3269 198	.2826 928	.2432 676	.2084 157	.1778 332	.1511 725
.79	.3614 657	.3160 716	.2750 872	.2383 925 ⁺	.2057 801	.1769 853
.80	.3980 232	.3518 437	.3096 225 ⁻	.2713 419	.2368 893	.2060 847

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

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 $x = .81$ to 1.00 $q = 3$ $p = 13$ to 18

	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$B(p, q) = .7326\ 0073 \times \frac{1}{10^8}$	$.5952\ 3810 \times \frac{1}{10^8}$	$.4901\ 9608 \times \frac{1}{10^8}$	$.4084\ 9673 \times \frac{1}{10^8}$	$.3439\ 9725 \times \frac{1}{10^8}$	$.2923\ 9766 \times \frac{1}{10^8}$	
x						
.81	.4364 525 ⁺	.3899 202	.3468 445 ⁻	.3073 010	.2712 670	.2386 456
.82	.4765 629	.4301 555 ⁺	.3866 652	.3462 482	.3089 635 ⁺	.2747 932
.83	.5181 084	.4723 415 ⁻	.4289 283	.3880 910	.3499 592	.3145 863
.84	.5607 843	.5162 002	.4733 995 ⁺	.4326 532	.3941 480	.3579 983
.85	.6042 252	.5613 793	.5197 576	.4796 620	.4413 206	.4048 963
.86	.6480 036	.6074 478	.5675 872	.5287 364	.4911 483	.4550 195 ⁻
.87	.6916 319	.6538 947	.6163 731	.5793 769	.5431 668	.5079 578
.88	.7345 656	.7001 300	.6654 976	.6309 576	.5967 629	.5631 315 ⁺
.89	.7762 116	.7454 904	.7142 426	.6827 240	.6511 660	.6197 751
.90	.8159 389	.7892 493	.7617 972	.7337 960	.7054 448	.6769 268
.91	.8530 963	.8306 340	.8072 732	.7831 804	.7585 154	.7334 296
.92	.8870 349	.8688 504	.8497 307	.8297 952	.8091 620	.7879 462
.93	.9171 390	.9031 186	.8882 169	.8725 105 ⁻	.8560 776	.8389 971
.94	.9428 667	.9327 204	.9218 205 ⁻	.9102 084	.8979 286	.8850 276
.95	.9637 998	.9570 621	.9497 470	.9418 711	.9334 536	.9245 163
.96	.9797 082	.9757 555 ⁻	.9714 188	.9667 005 ⁻	.9616 047	.9561 372
.97	.9906 286	.9887 205 ⁺	.9866 054	.9842 801	.9817 426	.9789 916
.98	.9969 606	.9963 146	.9955 912	.9947 876	.9939 017	.9929 313
.99	.9995 842	.9994 921	.9993 878	.9992 708	.9991 406	.9989 964
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .33$ to $.90$ $q = 3$ $p = 19$ to 24

	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$B(p, q) = .2506\ 2657 \times \frac{1}{10^3}$	$.2164\ 5022 \times \frac{1}{10^3}$	$.1882\ 1758 \times \frac{1}{10^3}$	$.1646\ 9038 \times \frac{1}{10^3}$	$.1449\ 2754 \times \frac{1}{10^3}$	$.1282\ 0513 \times \frac{1}{10^3}$	
x						
.33	.0000 001					
.34	.0000 001					
.35	.0000 002	.0000 001				
.36	.0000 003	.0000 001	.0000 001			
.37	.0000 006	.0000 002	.0000 001			
.38	.0000 009	.0000 004	.0000 002	.0000 001		
.39	.0000 014	.0000 006	.0000 003	.0000 001		
.40	.0000 022	.0000 010	.0000 004	.0000 002	.0000 001	
.41	.0000 034	.0000 015 ⁺	.0000 007	.0000 003	.0000 001	.0000 001
.42	.0000 053	.0000 024	.0000 011	.0000 005 ⁺	.0000 002	.0000 001
.43	.0000 080	.0000 038	.0000 018	.0000 008	.0000 004	.0000 002
.44	.0000 120	.0000 058	.0000 028	.0000 013	.0000 006	.0000 003
.45	.0000 178	.0000 088	.0000 043	.0000 021	.0000 010	.0000 005
.46	.0000 261	.0000 131	.0000 066	.0000 033	.0000 016	.0000 008
.47	.0000 379	.0000 195 ⁺	.0000 100	.0000 051	.0000 026	.0000 013
.48	.0000 547	.0000 287	.0000 150 ⁺	.0000 079	.0000 041	.0000 021
.49	.0000 781	.0000 419	.0000 224	.0000 119	.0000 063	.0000 034
.50	.0001 109	.0000 606	.0000 330	.0000 179	.0000 097	.0000 054
.51	.0001 554	.0000 868	.0000 482	.0000 267	.0000 148	.0000 081
.52	.0002 166	.0001 233	.0000 669	.0000 395	.0000 222	.0000 125
.53	.0002 995 ⁺	.0001 737	.0001 003	.0000 578	.0000 331	.0000 190
.54	.0004 111	.0002 429	.0001 429	.0000 838	.0000 490	.0000 285 ⁺
.55	.0005 602	.0003 379	.0002 019	.0001 206	.0000 718	.0000 426
.56	.0007 580	.0004 642	.0002 831	.0001 721	.0001 043	.0000 630
.57	.0010 187	.0006 348	.0003 949	.0002 438	.0001 503	.0000 924
.58	.0013 598	.0008 620	.0005 443	.0003 426	.0002 149	.0001 344
.59	.0018 034	.0011 625 ⁺	.0007 460	.0004 779	.0003 049	.0001 940
.60	.0023 765 ⁺	.0015 575 ⁺	.0010 170	.0006 618	.0004 293	.0002 777
.61	.0031 123	.0020 731	.0013 759	.0009 100	.0006 000	.0003 945
.62	.0040 511	.0027 419	.0018 499	.0012 427	.0008 326	.0005 562
.63	.0052 417	.0036 038	.0024 687	.0016 855 ⁺	.0011 472	.0007 786
.64	.0067 425 ⁺	.0047 076	.0032 750 ⁺	.0022 708	.0015 697	.0010 820
.65	.0086 231	.0061 125 ⁺	.0043 174	.0030 395 ⁺	.0021 333	.0014 931
.66	.0109 657	.0078 807	.0056 565 ⁺	.0040 422	.0028 799	.0020 461
.67	.0138 667	.0101 240	.0073 657	.0053 416	.0038 622	.0027 847
.68	.0174 383	.0129 162	.0095 337	.0070 146	.0051 458	.0037 645 ⁺
.69	.0218 099	.0163 843	.0122 665 ⁺	.0091 545 ⁺	.0068 120	.0050 552
.70	.0271 294	.0206 662	.0156 896	.0118 741	.0089 695 ⁺	.0067 437
.71	.0335 643	.0259 204	.0199 504	.0153 080	.0117 123	.0089 374
.72	.0413 029	.0323 284	.0252 206	.0196 156	.0152 131	.0117 677
.73	.0505 535 ⁺	.0400 956	.0316 979	.0249 838	.0196 368	.0153 642
.74	.0615 447	.0494 515 ⁺	.0396 076	.0316 294	.0251 888	.0200 083
.75	.0745 235 ⁺	.0606 494	.0492 033	.0398 012	.0321 085 ⁺	.0258 373
.76	.0897 527	.0739 653	.0607 670	.0497 810	.0406 726	.0331 483
.77	.1075 060	.0896 943	.0746 071	.0618 835 ⁺	.0511 957	.0422 505
.78	.1280 665 ⁺	.1081 467	.0910 555 ⁺	.0764 548	.0640 309	.0534 975 ⁺
.79	.1517 098	.1296 493	.1104 620	.0938 681	.0795 672	.0672 871
.80	.1787 028	.1544 915 ⁺	.1331 855 ⁺	.1145 174	.0982 252	.0840 581
.81	.2092 864	.1830 021	.1595 820	.1388 066	.1204 480	.1042 844
.82	.2436 602	.2154 439	.1899 028	.1671 353	.1466 882	.1284 637
.83	.2819 647	.2520 386	.2247 161	.1998 786	.1773 894	.1571 003
.84	.3242 587	.2929 341	.2639 901	.2373 617	.2129 604	.1906 800
.85	.3704 955 ⁺	.3381 769	.3079 590	.2798 276	.2537 421	.2296 413
.86	.4204 964	.3876 813	.3566 382	.3273 985 ⁺	.2999 664	.2743 234
.87	.4739 224	.4411 948	.4098 744	.3800 305 ⁺	.3517 060	.3249 208
.88	.5302 475 ⁺	.4982 634	.4673 028	.4374 627	.4088 162	.3814 152
.89	.5887 320	.5581 972	.5283 028	.4991 629	.4708 706	.4435 010
.90	.6484 088	.6200 409	.5919 567	.5642 737	.5370 940	.5105 052

TABLE I. THE $I_x(p, q)$ FUNCTION

$x = .91$ to 1.00

$q = 3$

$p = 19$ to 24

	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$B(p, q) = .2506\ 2657 \times \frac{1}{10^3}$	$.2164\ 5022 \times \frac{1}{10^3}$	$.1822\ 1758 \times \frac{1}{10^3}$	$.1646\ 9038 \times \frac{1}{10^3}$	$.1449\ 2754 \times \frac{1}{10^3}$	$.1282\ 0513 \times \frac{1}{10^3}$	
x						
.91	.7080 651	.6825 538	.6570 169	.6315 652	.6062 985 ⁺	.5813 066
.92	.7662 590	.7442 065 ⁻	.7218 894	.6994 022	.6768 332	.6542 643
.93	.8213 473	.8032 051	.7846 456	.7657 415 ⁺	.7465 624	.7271 749
.94	.8715 532	.8575 540	.8430 789	.8281 764	.8128 946	.7972 805 ⁺
.95	.9150 825 ⁻	.9051 770	.8948 257	.8840 554	.8728 935 ⁺	.8613 676
.96	.9503 052	.9441 172	.9375 826	.9307 120	.9235 166	.9160 083
.97	.9760 268	.9728 481	.9694 564	.9658 532	.9620 404	.9580 203
.98	.9918 747	.9907 302	.9894 965 ⁻	.9881 723	.9867 566	.9852 485 ⁺
.99	.9988 379	.9986 644	.9984 754	.9982 706	.9980 493	.9978 112
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .43$ to 1.00 $q = 3$ $p = 25$ to 30

	$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$
$B(p, q) = .1139\ 6011 \times \frac{1}{10^3}$	$.1017\ 5010 \times \frac{1}{10^3}$	$.9122\ 4229 \times \frac{1}{10^4}$	$.8210\ 1806 \times \frac{1}{10^4}$	$.7415\ 6470 \times \frac{1}{10^4}$	$.6720\ 4301 \times \frac{1}{10^4}$	
.43	.0000 001					
.44	.0000 001	.0000 001				
.45	.0000 002	.0000 001	.0000 001			
.46	.0000 004	.0000 002	.0000 001			
.47	.0000 007	.0000 003	.0000 002	.0000 001		
.48	.0000 011	.0000 006	.0000 003	.0000 001	.0000 001	
.49	.0000 018	.0000 009	.0000 005 ⁻	.0000 003	.0000 001	.0000 001
.50	.0000 028	.0000 015 ⁺	.0000 008	.0000 004	.0000 002	.0000 001
.51	.0000 045 ⁻	.0000 024	.0000 013	.0000 007	.0000 004	.0000 002
.52	.0000 070	.0000 039	.0000 022	.0000 012	.0000 007	.0000 004
.53	.0000 108	.0000 062	.0000 035 ⁻	.0000 020	.0000 011	.0000 006
.54	.0000 166	.0000 096	.0000 056	.0000 032	.0000 018	.0000 011
.55	.0000 252	.0000 149	.0000 088	.0000 051	.0000 030	.0000 018
.56	.0000 380	.0000 228	.0000 137	.0000 082	.0000 049	.0000 029
.57	.0000 567	.0000 346	.0000 211	.0000 129	.0000 078	.0000 047
.58	.0000 838	.0000 522	.0000 324	.0000 201	.0000 124	.0000 076
.59	.0001 230	.0000 779	.0000 492	.0000 310	.0000 195 ⁻	.0000 122
.60	.0001 791	.0001 152	.0000 740	.0000 474	.0000 303	.0000 193
.61	.0002 587	.0001 692	.0001 104	.0000 719	.0000 467	.0000 303
.62	.0003 706	.0002 463	.0001 633	.0001 081	.0000 714	.0000 470
.63	.0005 270	.0003 559	.0002 397	.0001 612	.0001 081	.0000 724
.64	.0007 439	.0005 102	.0003 491	.0002 383	.0001 624	.0001 104
.65	.0010 423	.0007 258	.0005 043	.0003 496	.0002 419	.0001 671
.66	.0014 499	.0010 250 ⁻	.0007 229	.0005 088	.0003 574	.0002 506
.67	.0020 027	.0014 368	.0010 285 ⁺	.0007 347	.0005 238	.0003 727
.68	.0027 470	.0019 997	.0014 525 ⁻	.0010 528	.0007 616	.0005 499
.69	.0037 419	.0027 633	.0020 361	.0014 972	.0010 987	.0008 049
.70	.0050 625 ⁺	.0037 916	.0028 335 ⁺	.0021 132	.0015 729	.0011 687
.71	.0068 029	.0051 663	.0039 148	.0029 605 ⁺	.0022 345 ⁺	.0016 836
.72	.0090 803	.0069 905 ⁺	.0053 701	.0041 171	.0031 504	.0024 064
.73	.0120 389	.0093 937	.0073 141	.0056 835 ⁺	.0044 082	.0034 130
.74	.0158 553	.0125 362	.0098 911	.0077 887	.0061 219	.0048 034
.75	.0207 420	.0166 147	.0132 812	.0105 959	.0084 380	.0067 080
.76	.0269 532	.0218 683	.0177 066	.0143 093	.0115 430	.0092 956
.77	.0347 887	.0285 834	.0234 378	.0191 823	.0156 714	.0127 816
.78	.0445 969	.0370 990	.0308 007	.0255 242	.0211 145 ⁺	.0174 378
.79	.0567 774	.0478 105 ⁻	.0401 817	.0337 086	.0282 295 ⁺	.0236 026
.80	.0717 800	.0611 716	.0520 322	.0441 790	.0374 477	.0316 913
.81	.0901 009	.0776 931	.0668 697	.0574 534	.0492 813	.0422 055 ⁻
.82	.1122 742	.0979 367	.0852 757	.0741 246	.0643 276	.0557 400
.83	.1388 569	.1225 036	.1078 862	.0948 551	.0832 668	.0729 851
.84	.1704 066	.1520 137	.1353 753	.1203 637	.1068 532	.0947 218
.85	.2074 486	.1870 756	.1684 265 ⁺	.1514 006	.1358 949	.1218 060
.86	.2504 326	.2282 428	.2076 917	.1887 085 ⁺	.1712 169	.1551 367
.87	.2996 758	.2759 556	.2537 316	.2329 645 ⁺	.2136 066	.1956 038
.88	.3552 929	.3304 663	.3069 383	.2847 000	.2637 324	.2440 084
.89	.4171 120	.3917 470	.3674 356	.3441 957	.3220 348	.3009 514
.90	.4845 811	.4593 829	.4349 600	.4113 512	.3885 856	.3666 835 ⁺
.91	.5566 686	.5324 545 ⁻	.5087 246	.4855 308	.4629 169	.4409 190
.92	.6317 706	.6094 208	.5872 774	.5653 964	.5438 279	.5226 165 ⁺
.93	.7076 419	.6880 230	.6683 739	.6487 466	.6291 895 ⁻	.6097 469
.94	.7813 802	.7652 382	.7488 975 ⁺	.7323 995 ⁺	.7157 837	.6990 876
.95	.8495 056	.8373 351	.8248 838	.8121 788	.7992 470	.7861 145 ⁻
.96	.9081 997	.9001 038	.8917 338	.8831 034	.8742 265 ⁻	.8651 169
.97	.9537 958	.9493 703	.9447 474	.9399 309	.9349 252	.9297 349
.98	.9836 475 ⁺	.9819 530	.9801 646	.9782 822	.9763 056	.9742 350 ⁻
.99	.9975 559	.9972 829	.9969 918	.9966 823	.9963 540	.9960 066
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_*(p, q)$ FUNCTION $x = .50$ to 1.00 $q = 3$ $p = 31$ to 36

$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p = 36$
$B(p, q) \approx (0100\ 4810) \times \frac{1}{100}$					
x					
.50	0000 001				
.51	0000 001	0000 001			
.52	0000 002	0000 001	0000 001		
.53	0000 003	0000 002	0000 001	0000 001	
.54	0000 006	0000 003	0000 002	0000 001	
.55	0000 010	0000 006	0000 003	0000 002	0000 001
.56	0000 017	0000 010	0000 006	0000 003	0000 002
.57	0000 029	0000 017	0000 010	0000 006	0000 003
.58	0000 047	0000 029	0000 017	0000 010	0000 006
.59	0000 076	0000 047	0000 029	0000 017	0000 010
.60	0000 123	0000 076	0000 047	0000 029	0000 017
.61	0000 196	0000 127	0000 082	0000 053	0000 022
.62	0000 309	0000 203	0000 133	0000 087	0000 037
.63	0000 484	0000 323	0000 215	0000 133	0000 063
.64	0000 750	0000 508	0000 334	0000 212	0000 106
.65	0001 152	0000 793	0000 545	0000 374	0000 175
.66	0001 754	0001 225	0000 855	0000 595	0000 288
.67	0002 648	0001 878	0001 330	0000 940	0000 468
.68	0003 964	0002 853	0002 050	0001 471	0000 754
.69	0005 886	0003 207	0003 112	0002 280	0001 203
.70	0008 668	0006 413	0004 746	0003 504	0002 002
.71	0012 664	0009 294	0007 130	0005 338	0003 380
.72	0018 450	0013 921	0010 621	0008 062	0004 627
.73	0027 981	0020 350	0015 688	0012 772	0007 120
.74	0042 626	0029 727	0022 981	0019 622	0010 697
.75	0065 233	0042 190	0034 365	0026 331	0016 305
.76	0097 717	0062 097	0053 880	0038 901	0024 578
.77	0140 681	0085 626	0083 710	0055 711	0036 487
.78	0197 787	0118 387	0127 337	0080 923	0053 681
.79	0270 636	0160 246	0180 721	0113 664	0078 265
.80	0370 791	0215 921	0240 301	0156 241	0113 062
.81	0500 919	0285 205	0315 837	0213 863	0161 813
.82	0670 282	0375 205	0405 926	0280 929	0220 388
.83	0880 523	0495 406	0520 470	0370 013	0300 017
.84	1130 520	0645 323	0675 576	0480 201	0417 313
.85	1430 321	0830 728	0860 394	0620 246	0565 442
.86	1780 858	1060 815	1130 420	0800 860	0747 205
.87	2180 972	1340 246	1430 227	1030 290	1000 871
.88	2630 932	1680 606	1780 433	1320 990	1305 772
.89	3130 452	2090 713	2180 417	1670 183	1660 573
.90	3680 575	2560 132	2630 293	2080 622	2070 608
.91	4280 753	3090 512	3130 825	2550 803	2540 902
.92	4930 834	3680 153	3680 862	3080 442	3070 823
.93	5630 600	4330 653	4280 985	3670 774	3670 364
.94	6380 330	5050 205	4930 523	4320 853	4300 822
.95	7180 100	5850 325	5630 325	5030 981	5000 842
.96	8030 100	6730 100	6380 100	5800 421	5650 550
.97	8930 330	7680 323	7180 333	6620 217	6400 217
.98	9880 100	8700 100	8030 100	7500 100	7350 100
.99	10880 100	9780 100	8930 100	8430 100	8300 100
1.00	11930 100	10920 100	9880 100	9400 100	9250 100

TABLES OF THE INCOMPLETE β -FUNCTION

·56 to 1·00

$$q = 3$$

$p = 37$ to 43

	$p = 37$	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$(p, q) = 3647\ 3721 \times \frac{1}{10^4}$		$3373\ 8192 \times \frac{1}{10^4}$	$3126\ 9543 \times \frac{1}{10^4}$	$2903\ 6005 \times \frac{1}{10^4}$	$2701\ 0237 \times \frac{1}{10^4}$	$2516\ 8630 \times \frac{1}{10^4}$	$2349\ 0721 \times \frac{1}{10^4}$
$\cdot 56$	0000 001						
$\cdot 57$	0000 001	0000 001					
$\cdot 58$	0000 002	0000 002	0000 001	0000 001			
$\cdot 59$	0000 004	0000 003	0000 002	0000 001	0000 001		
$\cdot 60$	0000 008	0000 005 ⁺	0000 003	0000 002	0000 001	0000 001	
$\cdot 61$	0000 014	0000 009	0000 006	0000 004	0000 002	0000 001	0000 001
$\cdot 62$	0000 024	0000 016	0000 010	0000 007	0000 004	0000 003	0000 002
$\cdot 63$	0000 042	0000 028	0000 018	0000 012	0000 008	0000 005 ⁺	0000 003
$\cdot 64$	0000 071	0000 048	0000 032	0000 021	0000 014	0000 010	0000 006
$\cdot 65$	0000 120	0000 082	0000 056	0000 038	0000 026	0000 018	0000 012
$\cdot 66$	0000 200	0000 138	0000 096	0000 066	0000 046	0000 032	0000 022
$\cdot 67$	0000 330	0000 232	0000 163	0000 114	0000 080	0000 056	0000 039
$\cdot 68$	0000 539	0000 385 ⁻	0000 274	0000 195 ⁺	0000 139	0000 099	0000 070
$\cdot 69$	0000 872	0000 632	0000 457	0000 330	0000 238	0000 172	0000 124
$\cdot 70$	0001 399	0001 028	0000 754	0000 553	0000 405 ⁻	0000 296	0000 216
$\cdot 71$	0002 223	0001 656	0001 232	0000 916	0000 680	0000 504	0000 374
$\cdot 72$	0003 499	0002 643	0001 994	0001 503	0001 131	0000 851	0000 640
$\cdot 73$	0005 458	0004 179	0003 196	0002 442	0001 864	0001 421	0001 083
$\cdot 74$	0008 435 ⁻	0006 545 ⁺	0005 074	0003 929	0003 039	0002 349	0001 814
$\cdot 75$	0012 917	0010 157	0007 978	0006 260	0004 907	0003 843	0003 007
$\cdot 76$	0019 602	0015 616	0012 427	0009 879	0007 846	0006 225 ⁺	0004 935 ⁻
$\cdot 77$	0029 476	0023 785 ⁻	0019 173	0015 439	0012 420	0009 982	0008 016
$\cdot 78$	0043 917	0035 890	0029 298	0023 894	0019 467	0015 846	0012 887
$\cdot 79$	0064 831	0053 645 ⁻	0044 343	0036 617	0030 209	0024 899	0020 505 ⁺
$\cdot 80$	0094 811	0079 421	0066 461	0055 562	0046 406	0038 724	0032 286
$\cdot 81$	0137 341	0116 447	0098 632	0083 462	0070 559	0059 599	0050 298
$\cdot 82$	0197 023	0169 050 ⁻	0144 904	0124 089	0106 168	0090 755 ⁺	0077 515 ⁺
$\cdot 83$	0279 836	0242 934	0210 693	0182 560	0158 043	0136 701	0118 144
$\cdot 84$	0393 392	0345 473	0303 102	0265 685 ⁺	0232 684	0203 610	0178 025 ⁺
$\cdot 85$	0547 164	0485 987	0431 249	0382 336	0338 681	0299 764	0265 109
$\cdot 86$	0752 622	0675 949	0606 539	0543 786	0487 119	0436 009	0389 961
$\cdot 87$	1023 193	0929 034	0842 804	0703 937	0691 892	0626 156	0566 242
$\cdot 88$	1373 908	1260 871	1156 163	1059 295 ⁻	0969 789	0887 181	0811 024
$\cdot 89$	1820 588	1688 329	1564 422	1448 491	1340 153	1239 028	1144 742
$\cdot 90$	2378 323	2228 081	2085 747	1951 077	1823 813	1703 689	1590 429
$\cdot 91$	3059 043	2894 197	2736 293	2585 231	2440 891	2303 134	2171 806
$\cdot 92$	3867 933	3694 457	3526 460	3363 977	3207 018	3055 571	2909 606
$\cdot 93$	4798 601	4625 228	4455 505 ⁺	4289 569	4127 531	3909 485 ⁺	3815 504
$\cdot 94$	5827 186	5665 004	5504 529	5345 947	5189 426	5035 120	4883 165 ⁺
$\cdot 95$	6906 193	6767 358	6628 522	6489 864	6351 553	6213 748	6076 599
$\cdot 96$	7060 068	7855 347	7749 524	7642 724	7535 069	7426 680	7317 670
$\cdot 97$	8886 535 ⁺	8821 711	8755 523	8688 027	8619 283	8549 348	8478 281
$\cdot 98$	9571 370	9543 298	9514 339	9484 505 ⁻	9453 805 ⁻	9422 251	9389 856
$\cdot 99$	9930 135 ⁺	9925 026	9919 702	9914 161	9908 402	9902 421	9896 219
$\cdot 00$	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000

$p = 44$ to 50

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$q) = 2195\ 8718 \times \frac{1}{10^4}$	$2055\ 7097 \times \frac{1}{10^4}$	$1927\ 2279 \times \frac{1}{10^4}$	$1809\ 2343 \times \frac{1}{10^4}$	$1700\ 6803 \times \frac{1}{10^4}$	$1600\ 6403 \times \frac{1}{10^4}$	$1508\ 2956 \times \frac{1}{10^4}$	
01	0000 001						
02	0000 001	0000 001					
03	0000 002	0000 001	0000 001	0000 001			
04	0000 004	0000 003	0000 002	0000 001	0000 001		
05	0000 008	0000 005+	0000 004	0000 003	0000 002	0000 001	
06	0000 015-	0000 010	0000 007	0000 005-	0000 003	0000 002	
07	0000 027	0000 019	0000 013	0000 009	0000 007	0000 003	
08	0000 050-	0000 035+	0000 025-	0000 018	0000 012	0000 006	
09	0000 089	0000 064	0000 046	0000 033	0000 024	0000 012	
10	0000 158	0000 115+	0000 084	0000 061	0000 045-	0000 024	
11	0000 277	0000 205-	0000 151	0000 112	0000 083	0000 061	
12	0000 480	0000 360	0000 270	0000 202	0000 151	0000 113	
13	0000 824	0000 627	0000 476	0000 361	0000 274	0000 208	
14	0001 399	0001 078	0000 830	0000 639	0000 491	0000 378	
15	0002 351	0001 836	0001 433	0001 118	0000 871	0000 678	
16	0003 909	0003 093	0002 446	0001 933	0001 526	0001 204	
17	0006 431	0005 156	0004 130	0003 306	0002 644	0002 113	
18	0010 472	0008 502	0006 898	0005 592	0004 530	0003 667	
19	0016 872	0013 872	0011 396	0009 355+	0007 674	0006 291	
20	0026 896	0022 388	0018 621	0015 477	0012 854	0010 669	
21	0042 414	0035 737	0030 089	0025 315+	0021 284	0017 882	
22	0066 153	0056 413	0048 071	0040 933	0034 831	0029 619	
23	0102 025-	0088 038	0075 912	0065 411	0056 324	0048 467	
24	0155 535-	0135 784	0118 455+	0103 267	0089 966	0078 327	
25	0234 283	0206 889	0182 570	0101 000	0141 885+	0124 961	
26	0348 518	0311 257	0277 788	0247 754	0220 825-	0196 701	
27	0511 692	0462 076	0416 992	0376 064	0338 941	0305 298	
28	0740 889	0676 365+	0617 061	0562 603	0512 642	0466 844	
29	1056 924	0975 213	0899 258	0828 720	0763 269	0702 590	
30	1483 754	1383 382	1289 033	1200 427	1117 288	1039 345-	
31	2046 739	1927 755-	1814 667	1707 283	1605 405-	1508 833	
32	2769 072	2633 904	2504 022	2379 336	2259 743	2145 133	
33	3665 640	3519 932	3378 401	3241 054	3107 886	2978 879	
34	4733 684	4586 785-	4442 562	4301 099	4162 465-	4026 719	
35	5940 247	5804 825+	5670 456	5537 256	5405 331	5274 781	
36	7208 154	7098 240	6988 032	6877 633	6767 140	6656 647	
37	8406 140	8332 982	8258 865+	8183 846	8107 981	8031 325+	
38	9356 633	9322 594	9287 753	9252 124	9215 723	9178 562	
39	9889 793	9876 142	9876 264	9869 160	9861 827	9854 265+	
40	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000	

$x = .01$ to $.60$ $q = 3.5$ $p = 3.5$ to 6

	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$
$B(p, q) = .1533\ 9808 \times \frac{x}{10}$		$.1065\ 6011 \times \frac{x}{10}$	$.7669\ 9039 \times \frac{x}{10^3}$	$.5683\ 2057 \times \frac{x}{10^3}$	$.4314\ 3210 \times \frac{x}{10^3}$	$.3343\ 0622 \times \frac{x}{10^3}$
x						
.01	.0000 018	.0000 002		.0000 001		
.02	.0000 203	.0000 036	.0000 006	.0000 008		
.03	.0000 821	.0000 179	.0000 038		.0000 002	
.04	.0002 203	.0000 554	.0000 137	.0000 033	.0000 008	.0000 002
.05	.0004 715 ⁺	.0001 324	.0000 365 ⁻	.0000 099	.0000 026	.0000 007
.06	.0008 747	.0002 689	.0000 811	.0000 241	.0000 070	.0000 020
.07	.0014 700	.0004 879	.0001 589	.0000 509	.0000 161	.0000 050 ⁺
.08	.0022 981	.0008 148	.0002 835 ⁻	.0000 971	.0000 328	.0000 109
.09	.0033 994	.0012 776	.0004 712	.0001 711	.0000 613	.0000 217
.10	.0048 140	.0019 058	.0007 405 ⁺	.0002 832	.0001 069	.0000 399
.11	.0065 804	.0027 304	.0011 121	.0004 459	.0001 764	.0000 690
.12	.0087 361	.0037 833	.0016 086	.0006 733	.0002 781	.0001 135 ⁺
.13	.0113 166	.0050 974	.0022 544	.0009 818	.0004 219	.0001 792
.14	.0143 557	.0067 055 ⁺	.0030 758	.0013 893	.0006 193	.0002 729
.15	.0178 848	.0086 407	.0041 001	.0019 160	.0008 836	.0004 029
.16	.0219 331	.0109 358	.0053 559	.0025 836	.0012 301	.0005 790
.17	.0265 272	.0136 229	.0068 729	.0034 155 ⁺	.0016 755 ⁻	.0008 126
.18	.0316 912	.0167 334	.0086 813	.0044 368	.0022 385 ⁺	.0011 168
.19	.0374 464	.0202 976	.0108 117	.0056 739	.0029 397	.0015 062
.20	.0438 114	.0243 445 ⁺	.0132 951	.0071 543	.0038 011	.0019 973
.21	.0508 020	.0289 016	.0161 623	.0089 068	.0048 467	.0026 084
.22	.0584 312	.0339 947	.0194 439	.0109 608	.0061 016	.0033 596
.23	.0667 088	.0396 476	.0231 699	.0133 465 ⁺	.0075 927	.0042 726
.24	.0756 421	.0458 824	.0273 697	.0160 946	.0093 480	.0053 710
.25	.0852 353	.0527 186	.0320 715 ⁻	.0192 360	.0113 966	.0066 800
.26	.0954 899	.0601 737	.0373 024	.0228 014	.0137 688	.0082 262
.27	.1064 045 ⁻	.0682 626	.0430 882	.0268 216	.0164 954	.0100 380
.28	.1179 748	.0769 977	.0494 530	.0313 267	.0196 079	.0121 448
.29	.1301 940	.0863 889	.0564 190	.0363 461	.0231 383	.0145 775 ⁻
.30	.1430 526	.0964 432	.0640 066	.0419 084	.0271 185 ⁺	.0173 678
.31	.1565 382	.1071 650 ⁺	.0722 339	.0480 410	.0315 805 ⁻	.0205 484
.32	.1706 363	.1185 560	.0811 167	.0547 699	.0365 558	.0241 525 ⁺
.33	.1853 298	.1306 150 ⁻	.0906 684	.0621 193	.0420 756	.0282 140
.34	.2005 991	.1433 378	.1008 998	.0701 119	.0481 700	.0327 667
.35	.2164 227	.1567 177	.1118 190	.0787 680	.0548 681	.0378 445 ⁻
.36	.2327 766	.1707 450 ⁻	.1234 311	.0881 060	.0621 977	.0434 809
.37	.2496 350 ⁻	.1854 072	.1357 386	.0981 414	.0701 849	.0497 089
.38	.2669 701	.2006 891	.1487 407	.1088 874	.0788 540	.0565 605 ⁻
.39	.2847 524	.2165 728	.1624 338	.1203 544	.0882 272	.0640 666
.40	.3029 506	.2330 378	.1768 111	.1325 496	.0983 242	.0722 568
.41	.3215 320	.2500 607	.1918 625 ⁺	.1454 773	.1091 623	.0811 585 ⁺
.42	.3404 622	.2676 161	.2075 752	.1591 384	.1207 557	.0907 975 ⁻
.43	.3597 059	.2856 759	.2239 328	.1735 305 ⁺	.1331 157	.1011 968
.44	.3792 263	.3042 096	.2409 160	.1886 478	.1462 503	.1123 770
.45	.3989 858	.3231 847	.2585 024	.2044 808	.1601 639	.1243 557
.46	.4189 460	.3425 666	.2766 664	.2210 166	.1748 575 ⁻	.1371 472
.47	.4390 676	.3623 187	.2953 797	.2382 386	.1903 279	.1507 621
.48	.4593 106	.3824 026	.3146 108	.2561 263	.2065 682	.1652 073
.49	.4796 350 ⁻	.4027 783	.3343 255 ⁻	.2746 558	.2235 674	.1804 858
.50	.5000 000 ⁰	.4234 041	.3544 869	.2937 995 ⁺	.2413 101	.1965 961
.51	.5203 650 ⁺	.4442 373	.3750 556	.3135 262	.2597 767	.2135 322
.52	.5406 894	.4652 335 ⁺	.3959 895 ⁺	.3338 009	.2789 434	.2312 835 ⁺
.53	.5609 324	.4863 479	.4172 446	.3545 855 ⁺	.2987 819	.2498 345 ⁻
.54	.5810 540	.5075 344	.4387 744	.3758 383	.3192 595 ⁺	.2691 645 ⁺
.55	.6010 142	.5287 465 ⁻	.4605 307	.3975 144	.3403 393	.2892 480
.56	.6207 737	.5499 371	.4824 634	.4195 659	.3619 798	.3100 540
.57	.6402 941	.5710 590	.5045 211	.4419 417	.3841 356	.3315 465 ⁻
.58	.6595 378	.5920 649	.5266 508	.4645 885 ⁻	.4067 572	.3536 840
.59	.6784 680	.6129 075 ⁺	.5487 986	.4874 499	.4297 909	.3764 200
.60	.6970 494	.6335 401	.5709 098	.5104 678	.4531 795 ⁺	.3997 027

TABLE I. THE $I_x(p, q)$ FUNCTION

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 $x = .61$ to 1.00 $q = 3.5$ $p = 3.5$ to 6

	$p = 3.5$	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$
$B(p, q) = .1533\ 9808 \times \frac{x}{10}$	$.1065\ 6011 \times \frac{x}{10}$	$.7669\ 9039 \times \frac{x}{10^3}$	$.5683\ 2057 \times \frac{x}{10^3}$	$.4314\ 3210 \times \frac{x}{10^3}$	$.3343\ 0622 \times \frac{x}{10^3}$	
.61	.7152 476	.6539 163	.5929 289	.5335 816	.4768 622	.4234 754
.62	.7330 299	.6739 907	.6148 005 ⁻	.5567 294	.5007 748	.4476 764
.63	.7503 650 ⁺	.6937 187	.6364 686	.5798 476	.5248 501	.4722 394
.64	.7672 234	.7130 571	.6578 780	.6028 717	.5490 185 ⁺	.4970 937
.65	.7835 773	.7319 638	.6789 737	.6257 363	.5732 077	.5221 645 ⁺
.66	.7994 009	.7503 987	.6997 016	.6483 759	.5973 437	.5473 733
.67	.8146 702	.7683 231	.7200 089	.6707 246	.6213 507	.5726 380
.68	.8293 637	.7857 007	.7398 441	.6927 172	.6451 522	.5978 740
.69	.8434 618	.8024 972	.7591 575 ⁻	.7142 893	.6686 709	.6229 941
.70	.8569 474	.8186 809	.7779 015 ⁺	.7353 776	.6918 293	.6479 092
.71	.8698 060	.8342 225 ⁺	.7960 310	.7559 207	.7145 506	.6725 293
.72	.8820 252	.8490 958	.8135 034	.7758 592	.7367 589	.6967 636
.73	.8935 955 ⁺	.8632 774	.8302 793	.7951 362	.7583 801	.7205 215 ⁺
.74	.9045 101	.8767 472	.8463 226	.8136 980	.7793 423	.7437 135 ⁺
.75	.9147 647	.8894 882	.8616 008	.8314 946	.7995 763	.7662 517
.76	.9243 579	.9014 873	.8760 855 ⁺	.8484 796	.8190 168	.7880 508
.77	.9332 912	.9127 346	.8897 524	.8646 113	.8376 025 ⁻	.8090 288
.78	.9415 688	.9232 243	.9025 816	.8798 529	.8552 771	.8261 084
.79	.9491 980	.9329 543	.9145 582	.8941 731	.8719 899	.8482 174
.80	.9561 886	.9419 266	.9256 723	.9075 463	.8876 964	.8662 899
.81	.9625 536	.9501 472	.9359 190	.9199 530	.9023 593	.8832 671
.82	.9683 088	.9576 262	.9452 990	.9313 807	.9159 486	.8990 988
.83	.9734 728	.9643 779	.9538 186	.9418 236	.9284 427	.9137 435 ⁻
.84	.9780 669	.9704 207	.9614 898	.9512 833	.9398 290	.9271 702
.85	.9821 152	.9757 774	.9683 305 ⁺	.9597 693	.9501 040	.9393 589
.86	.9856 443	.9804 746	.9743 644	.9672 985 ⁺	.9592 745 ⁻	.9503 013
.87	.9886 834	.9845 432	.9796 213	.9738 963	.9673 571	.9600 020
.88	.9912 639	.9880 178	.9841 365 ⁻	.9795 959	.9743 797	.9684 790
.89	.9934 196	.9909 368	.9879 513	.9844 388	.9803 808	.9757 640
.90	.9951 860	.9933 422	.9911 126	.9884 746	.9854 098	.9819 034
.91	.9966 006	.9952 791	.9936 723	.9917 606	.9895 272	.9869 579
.92	.9977 019	.9967 956	.9956 873	.9943 616	.9928 043	.9910 028
.93	.9985 300	.9979 419	.9972 189	.9963 492	.9953 221	.9941 275 ⁺
.94	.9991 253	.9987 704	.9983 317	.9978 013	.9971 713	.9964 348
.95	.9995 285 ⁻	.9993 345 ⁻	.9990 934	.9988 004	.9984 505 ⁺	.9980 392
.96	.9997 797	.9996 878	.9995 730	.9994 327	.9992 644	.9990 655 ⁻
.97	.9999 179	.9998 832	.9998 396	.9997 860	.9997 214	.9996 447
.98	.9999 797	.9999 711	.9999 601	.9999 466	.9999 302	.9999 106
.99	.9999 982	.9999 974	.9999 964	.9999 951	.9999 936	.9999 918
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .05$ to $.60$ $q = 3.5$ $p = 6.5$ to 9

	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$B(p, q) = .2636\ 5295 \times \frac{1}{10^3}$	$.2111\ 4077 \times \frac{1}{10^3}$	$.1713\ 7442 \times \frac{1}{10^3}$	$.1407\ 6051 \times \frac{1}{10^3}$	$.1168\ 4619 \times \frac{1}{10^3}$	$.9792\ 0356 \times \frac{1}{10^3}$	
.05	.0000 002					
.06	.0000 006	.0000 002				
.07	.0000 016	.0000 005-	.0000 001			
.08	.0000 036	.0000 012	.0000 004	.0000 001		
.09	.0000 076	.0000 026	.0000 009	.0000 003	.0000 001	
.10	.0000 147	.0000 054	.0000 020	.0000 007	.0000 003	.0000 001
.11	.0000 267	.0000 102	.0000 039	.0000 015-	.0000 006	.0000 002
.12	.0000 459	.0000 184	.0000 073	.0000 029	.0000 011	.0000 004
.13	.0000 754	.0000 314	.0000 130	.0000 053	.0000 022	.0000 009
.14	.0001 191	.0000 515-	.0000 221	.0000 094	.0000 040	.0000 017
.15	.0001 819	.0000 814	.0000 361	.0000 159	.0000 070	.0000 030
.16	.0002 699	.0001 247	.0000 571	.0000 260	.0000 118	.0000 053
.17	.0003 903	.0001 858	.0000 878	.0000 412	.0000 192	.0000 089
.18	.0005 517	.0002 702	.0001 313	.0000 633	.0000 304	.0000 145-
.19	.0007 641	.0003 843	.0001 918	.0000 951	.0000 468	.0000 229
.20	.0010 393	.0005 301	.0002 744	.0001 395+	.0000 705-	.0000 354
.21	.0013 903	.0007 347	.0003 852	.0002 006	.0001 038	.0000 534
.22	.0018 321	.0009 906	.0005 315+	.0002 832	.0001 500+	.0000 790
.23	.0023 814	.0013 161	.0007 218	.0003 932	.0002 129	.0001 146
.24	.0030 568	.0017 250+	.0009 662	.0005 375-	.0002 972	.0001 634
.25	.0038 785+	.0022 331	.0012 761	.0007 243	.0004 086	.0002 292
.26	.0048 688	.0028 577	.0016 648	.0009 634	.0005 541	.0003 169
.27	.0060 517	.0036 183	.0021 473	.0012 659	.0007 418	.0004 323
.28	.0074 529	.0045 360	.0027 404	.0016 447	.0009 811	.0005 821
.29	.0090 999	.0056 342	.0034 629	.0021 144	.0012 833	.0007 747
.30	.0110 219	.0069 380	.0043 356	.0026 916	.0016 611	.0010 196
.31	.0132 495-	.0084 745-	.0053 813	.0033 948	.0021 291	.0013 281
.32	.0158 148	.0102 727	.0066 249	.0042 448	.0027 039	.0017 131
.33	.0187 511	.0123 632	.0080 935+	.0052 644	.0034 042	.0021 897
.34	.0220 927	.0147 787	.0098 163	.0064 786	.0042 510	.0027 746
.35	.0258 749	.0175 532	.0118 244	.0079 148	.0052 675-	.0034 872
.36	.0301 336	.0207 221	.0141 509	.0096 028	.0064 792	.0043 489
.37	.0349 051	.0243 221	.0168 310	.0115 744	.0079 144	.0053 837
.38	.0402 257	.0283 911	.0199 013	.0138 638	.0096 036	.0066 183
.39	.0461 318	.0329 676	.0234 003	.0165 074	.0115 799	.0080 818
.40	.0526 591	.0380 908	.0273 677	.0195 436	.0138 789	.0098 063
.41	.0598 428	.0438 000	.0318 446	.0230 127	.0165 388	.0118 265-
.42	.0677 168	.0501 346	.0368 727	.0269 568	.0196 000	.0141 800
.43	.0763 137	.0571 335-	.0424 947	.0314 194	.0231 051	.0169 070
.44	.0856 642	.0648 349	.0487 533	.0364 455-	.0270 990	.0200 506
.45	.0957 970	.0732 760	.0556 914	.0420 808	.0316 280	.0236 562
.46	.1067 380	.0824 922	.0633 512	.0483 719	.0367 406	.0277 718
.47	.1185 107	.0925 173	.0717 742	.0553 654	.0424 861	.0324 474
.48	.1311 349	.1033 824	.0810 007	.0631 079	.0489 149	.0377 350-
.49	.1446 270	.1151 161	.0910 691	.0716 453	.0560 779	.0436 881
.50	.1589 996	.1277 437	.1020 155-	.0810 224	.0640 260	.0503 615+
.51	.1742 608	.1412 866	.1138 734	.0912 823	.0728 099	.0578 107
.52	.1904 140	.1557 624	.1266 728	.1024 660	.0824 790	.0660 912
.53	.2074 580	.1711 839	.1404 403	.1146 116	.0930 811	.0752 586
.54	.2253 861	.1875 590	.1551 976	.1277 539	.1046 619	.0853 670
.55	.2441 861	.2048 904	.1709 618	.1419 235-	.1172 640	.0964 692
.56	.2638 404	.2231 746	.1877 446	.1571 463	.1309 264	.1086 154
.57	.2843 251	.2424 023	.2055 516	.1734 429	.1456 838	.1218 526
.58	.3056 106	.2625 575-	.2243 821	.1908 279	.1615 653	.1362 237
.59	.3276 606	.2836 174	.2442 281	.2093 091	.1785 945-	.1517 666
.60	.3504 331	.3055 524	.2650 745+	.2288 871	.1967 877	.1685 132

TABLE I. THE $I_n(p, q)$ FUNCTION $x = .61$ to 1.00 $q = 3.5$ $p = 6.5$ to 9

	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$B(p, q) = 2636.5295 \times \frac{1}{100}$	$2111.4077 \times \frac{1}{100}$	$1713.7442 \times \frac{1}{100}$	$1407.6051 \times \frac{1}{100}$	$1168.4610 \times \frac{1}{100}$	$9792.0356 \times \frac{1}{100}$	
x						
.61	.3738 793	.3383 253	.2868 083	.2495 545 ⁺	.2161 539	.1864 887
.62	.3970 443	.3518 915 ⁺	.3006 083	.2712 954	.2360 945 ⁺	.2057 102
.63	.4225 670	.3761 991	.3333 447	.2940 846	.2583 979	.2261 862
.64	.4476 803	.4011 884	.3578 790	.3178 877	.2812 485 ⁺	.2479 152
.65	.4732 108	.4267 022	.3832 136	.3420 601	.3052 161	.2708 849
.66	.4990 801	.4529 358	.4092 822	.3683 460	.3302 602	.2950 717
.67	.5252 039	.4795 475 ⁺	.4360 092	.3948 826	.3563 286	.3204 392
.68	.5514 934	.5065 084	.4633 160	.4221 910	.3833 570	.3469 377
.69	.5778 552	.5337 530	.4910 913	.4501 851	.4112 685 ⁺	.3745 039
.70	.6041 921	.5611 697	.5192 514	.4787 672	.4399 734	.4030 599
.71	.6304 935 ⁺	.5886 514	.5476 805 ⁺	.5078 291	.4693 694	.4325 128
.72	.6564 860	.6160 861	.5762 615 ⁺	.5342 527	.4963 415	.4602 551
.73	.6826 303	.6433 575 ⁺	.6043 794	.5609 191	.5230 722	.4870 699
.74	.7072 471	.6703 494	.6333 723	.5966 649	.5584 925 ⁺	.5251 917
.75	.7319 142	.6960 314	.6616 477	.6263 728	.5913 822	.5569 168
.76	.7559 299	.7220 891	.6895 441	.6538 826	.6222 712	.5886 439
.77	.7791 946	.7483 976	.7169 220	.6850 380	.6529 995 ⁺	.6210 054
.78	.8016 086	.7730 358	.7436 453	.7136 788	.6813 641	.6499 122
.79	.8230 749	.7967 853	.7665 695 ⁺	.7416 427	.7112 105 ⁺	.6844 668
.80	.8435 064	.8195 326	.7945 573	.7687 675 ⁺	.7423 151	.7154 642
.81	.8628 109	.8411 700	.8184 491	.7948 943	.7706 824	.7456 054
.82	.8809 116	.8615 979	.8411 947	.8163 948	.7947 991	.7749 496
.83	.8979 072	.8804 290	.8623 999	.8415 412	.8236 471	.8040 154
.84	.9143 645	.8953 757	.8823 520	.8657 648	.8481 668	.8296 090
.85	.9297 695 ⁺	.9117 514	.9010 481	.8864 296	.8709 995 ⁺	.8547 995
.86	.9443 983	.9276 944	.9179 211	.9054 246	.8921 472	.8781 473
.87	.9581 175	.9428 774	.9334 422	.9226 581	.9114 558	.8995 702
.88	.9718 011	.9576 199	.9486 743	.9380 651	.9288 168	.9186 509
.89	.9854 804	.9728 295	.9646 944	.9546 155 ⁺	.9444 717	.9361 545
.90	.9979 443	.9864 250	.9786 411	.9682 914	.9574 774	.9512 030
.91	.00849 407	.00807 664	.00771 276	.00741 192	.00708 707	.00649 868
.92	.00890 462	.00850 251	.00816 415 ⁺	.00781 592	.00750 020	.00714 501
.93	.00927 505	.00887 694	.00854 523	.00824 050	.00794 554	.00760 964
.94	.00959 848	.00920 151	.00887 198	.00857 946	.00829 417	.00804 296
.95	.00975 621	.00936 149	.00903 936	.00874 944	.00846 144	.00820 476
.96	.00988 144	.00949 659	.00917 606	.00889 152	.00860 274	.00836 052
.97	.00999 548	.00961 505 ⁺	.00930 199	.00901 940	.00872 314	.00850 694
.98	.00998 875 ⁺	.00960 606	.00929 296	.00900 742	.00871 540	.00850 087
.99	.00999 806	.00960 871	.00930 842	.00900 808	.00871 700	.00850 726
1.00	1.00000 000	1.00000 000	1.00000 000	1.00000 000	1.00000 000	1.00000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .11$ to $.70$ $q = 3.5$ $p = 9.5$ to 13

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$B(p, q) = .8276\ 6053 \times \frac{1}{10^8}$	$.7050\ 2657 \times \frac{1}{10^8}$	$.6048\ 2885 \times \frac{1}{10^8}$	$.5222\ 4190 \times \frac{1}{10^8}$	$.3961\ 8351 \times \frac{1}{10^8}$	$.3067\ 2272 \times \frac{1}{10^8}$	
x						
.11	.0000 001					
.12	.0000 002	.0000 001				
.13	.0000 004	.0000 001	.0000 001			
.14	.0000 007	.0000 003	.0000 001			
.15	.0000 013	.0000 006	.0000 002	.0000 001		
.16	.0000 024	.0000 011	.0000 005 ⁻	.0000 002		
.17	.0000 041	.0000 019	.0000 009	.0000 004	.0000 001	
.18	.0000 069	.0000 032	.0000 015 ⁺	.0000 007	.0000 002	
.19	.0000 112	.0000 054	.0000 026	.0000 013	.0000 003	.0000 001
.20	.0000 177	.0000 088	.0000 044	.0000 022	.0000 005 ⁺	.0000 001
.21	.0000 274	.0000 139	.0000 071	.0000 036	.0000 009	.0000 002
.22	.0000 414	.0000 216	.0000 112	.0000 058	.0000 015 ⁺	.0000 004
.23	.0000 614	.0000 327	.0000 174	.0000 092	.0000 025 ⁺	.0000 007
.24	.0000 894	.0000 487	.0000 264	.0000 142	.0000 041	.0000 012
.25	.0001 280	.0000 711	.0000 393	.0000 217	.0000 065 ⁺	.0000 019
.26	.0001 804	.0001 022	.0000 576	.0000 324	.0000 101	.0000 031
.27	.0002 506	.0001 447	.0000 831	.0000 476	.0000 154	.0000 049
.28	.0003 436	.0002 019	.0001 182	.0000 689	.0000 232	.0000 077
.29	.0004 653	.0002 782	.0001 657	.0000 983	.0000 342	.0000 118
.30	.0006 227	.0003 786	.0002 293	.0001 383	.0000 498	.0000 177
.31	.0008 244	.0005 094	.0003 135 ⁻	.0001 922	.0000 715 ⁻	.0000 262
.32	.0010 801	.0006 780	.0004 238	.0002 639	.0001 013	.0000 384
.33	.0014 016	.0008 932	.0005 668	.0003 584	.0001 418	.0000 554
.34	.0018 023	.0011 655 ⁻	.0007 506	.0004 816	.0001 962	.0000 790
.35	.0022 976	.0015 071	.0009 846	.0006 408	.0002 687	.0001 113
.36	.0029 051	.0019 321	.0012 798	.0008 446	.0003 641	.0001 551
.37	.0036 449	.0024 570	.0016 495 ⁺	.0011 033	.0004 886	.0002 138
.38	.0045 395 ⁺	.0031 002	.0021 088	.0014 291	.0006 498	.0002 919
.39	.0056 141	.0038 830	.0026 751	.0018 362	.0008 564	.0003 947
.40	.0068 965 ⁺	.0048 294	.0033 686	.0023 410	.0011 194	.0005 290
.41	.0084 178	.0059 662	.0042 120	.0029 628	.0014 515 ⁻	.0007 028
.42	.0102 118	.0073 231	.0052 311	.0037 232	.0018 677	.0009 260
.43	.0123 154	.0089 333	.0064 549	.0046 474	.0023 856	.0012 104
.44	.0147 687	.0108 330	.0079 157	.0057 634	.0030 257	.0015 702
.45	.0176 147	.0130 621	.0096 492	.0071 028	.0038 117	.0020 222
.46	.0208 995 ⁻	.0156 635 ⁻	.0116 949	.0087 012	.0047 707	.0025 860
.47	.0246 720	.0186 838	.0140 960	.0105 977	.0059 335 ⁺	.0032 846
.48	.0289 839	.0221 729	.0168 994	.0128 357	.0073 352	.0041 449
.49	.0338 893	.0261 838	.0201 558	.0154 624	.0090 150 ⁻	.0051 975 ⁺
.50	.0394 446	.0307 726	.0239 196	.0185 296	.0110 168	.0064 778
.51	.0457 080	.0359 983	.0282 487	.0220 929	.0133 894	.0080 259
.52	.0527 391	.0419 222	.0332 047	.0262 124	.0161 866	.0098 871
.53	.0605 982	.0486 078	.0388 518	.0309 516	.0194 671	.0121 123
.54	.0693 463	.0561 200	.0452 574	.0363 783	.0232 950 ⁻	.0147 581
.55	.0790 438	.0645 250 ⁻	.0524 908	.0425 633	.0277 392	.0178 873
.56	.0897 500 ⁻	.0738 889	.0606 230	.0495 804	.0328 738	.0215 689
.57	.1015 224	.0842 777	.0697 262	.0575 056	.0387 773	.0258 782
.58	.1144 159	.0957 560	.0798 727	.0664 169	.0455 328	.0308 965 ⁻
.59	.1284 813	.1083 860	.0911 337	.0763 927	.0532 267	.0367 113
.60	.1437 649	.1222 266	.1035 793	.0875 116	.0619 488	.0434 157
.61	.1603 073	.1373 324	.1172 761	.0998 507	.0717 906	.0511 079
.62	.1781 419	.1537 523	.1322 868	.1134 848	.0828 450 ⁻	.0598 906
.63	.1972 943	.1715 280	.1486 686	.1284 846	.0952 043	.0698 696
.64	.2177 805 ⁻	.1906 932	.1664 716	.1449 156	.1089 593	.0811 532
.65	.2396 063	.2112 717	.1857 373	.1628 359	.1241 974	.0938 500 ⁺
.66	.2627 660	.2332 763	.2064 972	.1822 951	.1410 003	.1080 678
.67	.2872 408	.2567 073	.2287 708	.2033 319	.1594 427	.1239 108
.68	.3129 984	.2815 510	.2525 641	.2259 723	.1795 893	.1414 780
.69	.3399 915 ⁻	.3077 784	.2778 679	.2502 276	.2014 925 ⁺	.1608 596
.70	.3681 569	.3353 439	.3046 560	.2760 924	.2251 900	.1821 350 ⁻

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$p = 9.5$ to 13

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$B(p, q) = .8276\ 6053 \times \frac{1}{10^3}$	$.7050\ 2657 \times \frac{1}{10^3}$	$.6048\ 2885 \times \frac{1}{10^3}$	$.5222\ 4190 \times \frac{1}{10^3}$	$.3961\ 8351 \times \frac{1}{10^3}$	$.3067\ 2272 \times \frac{1}{10^3}$	
$\cdot 71$	$\cdot 3974\ 153$	$\cdot 3641\ 842$	$\cdot 3328\ 839$	$\cdot 3035\ 425^+$	$\cdot 2507\ 016$	$\cdot 2053\ 685^+$
$\cdot 72$	$\cdot 4276\ 701$	$\cdot 3942\ 173$	$\cdot 3624\ 868$	$\cdot 3325\ 333$	$\cdot 2780\ 270$	$\cdot 2306\ 066$
$\cdot 73$	$\cdot 4588\ 070$	$\cdot 4253\ 474$	$\cdot 3933\ 789$	$\cdot 3629\ 972$	$\cdot 3071\ 424$	$\cdot 2578\ 739$
$\cdot 74$	$\cdot 4906\ 945^-$	$\cdot 4574\ 348$	$\cdot 4254\ 517$	$\cdot 3948\ 428$	$\cdot 3379\ 980$	$\cdot 2871\ 692$
$\cdot 75$	$\cdot 5231\ 833$	$\cdot 4903\ 549$	$\cdot 4585\ 738$	$\cdot 4279\ 531$	$\cdot 3705\ 151$	$\cdot 3184\ 619$
$\cdot 76$	$\cdot 5561\ 072$	$\cdot 5239\ 390$	$\cdot 4925\ 898$	$\cdot 4621\ 843$	$\cdot 4045\ 841$	$\cdot 3516\ 878$
$\cdot 77$	$\cdot 5892\ 838$	$\cdot 5580\ 041$	$\cdot 5273\ 207$	$\cdot 4973\ 655^+$	$\cdot 4400\ 620$	$\cdot 3867\ 459$
$\cdot 78$	$\cdot 6225\ 156$	$\cdot 5923\ 481$	$\cdot 5625\ 638$	$\cdot 5332\ 980$	$\cdot 4767\ 711$	$\cdot 4234\ 944$
$\cdot 79$	$\cdot 6555\ 917$	$\cdot 6267\ 508$	$\cdot 5980\ 942$	$\cdot 5697\ 563$	$\cdot 5144\ 976$	$\cdot 4617\ 485^-$
$\cdot 80$	$\cdot 6882\ 900$	$\cdot 6609\ 704$	$\cdot 6336\ 659$	$\cdot 6064\ 886$	$\cdot 5529\ 915^-$	$\cdot 5012\ 776$
$\cdot 81$	$\cdot 7203\ 797$	$\cdot 6947\ 755^+$	$\cdot 6690\ 145^-$	$\cdot 6432\ 191$	$\cdot 5919\ 674$	$\cdot 5418\ 048$
$\cdot 82$	$\cdot 7516\ 246$	$\cdot 7278\ 884$	$\cdot 7038\ 596$	$\cdot 6796\ 506$	$\cdot 6311\ 059$	$\cdot 5830\ 062$
$\cdot 83$	$\cdot 7817\ 866$	$\cdot 7600\ 490$	$\cdot 7379\ 095^+$	$\cdot 7154\ 683$	$\cdot 6700\ 568$	$\cdot 6245\ 128$
$\cdot 84$	$\cdot 8106\ 301$	$\cdot 7909\ 895^-$	$\cdot 7708\ 655^-$	$\cdot 7503\ 445^-$	$\cdot 7084\ 432$	$\cdot 6659\ 133$
$\cdot 85$	$\cdot 8379\ 272$	$\cdot 8204\ 457$	$\cdot 8024\ 276$	$\cdot 7839\ 449$	$\cdot 7458\ 678$	$\cdot 7067\ 595^+$
$\cdot 86$	$\cdot 8634\ 624$	$\cdot 8481\ 632$	$\cdot 8323\ 017$	$\cdot 8159\ 357$	$\cdot 7819\ 210$	$\cdot 7465\ 740$
$\cdot 87$	$\cdot 8870\ 394$	$\cdot 8739\ 041$	$\cdot 8602\ 070$	$\cdot 8459\ 922$	$\cdot 8161\ 900$	$\cdot 7848\ 603$
$\cdot 88$	$\cdot 9084\ 867$	$\cdot 8974\ 547$	$\cdot 8858\ 848$	$\cdot 8738\ 088$	$\cdot 8482\ 712$	$\cdot 8211\ 163$
$\cdot 89$	$\cdot 9276\ 652$	$\cdot 9186\ 338$	$\cdot 9091\ 084$	$\cdot 8991\ 098$	$\cdot 8777\ 843$	$\cdot 8548\ 504$
$\cdot 90$	$\cdot 9444\ 748$	$\cdot 9373\ 013$	$\cdot 9296\ 930$	$\cdot 9216\ 620$	$\cdot 9043\ 875^+$	$\cdot 8856\ 016$
$\cdot 91$	$\cdot 9588\ 618$	$\cdot 9533\ 672$	$\cdot 9475\ 073$	$\cdot 9412\ 875^-$	$\cdot 9277\ 966$	$\cdot 9129\ 623$
$\cdot 92$	$\cdot 9708\ 254$	$\cdot 9668\ 004$	$\cdot 9624\ 843$	$\cdot 9578\ 779$	$\cdot 9478\ 036$	$\cdot 9366\ 043$
$\cdot 93$	$\cdot 9804\ 246$	$\cdot 9776\ 374$	$\cdot 9740\ 323$	$\cdot 9714\ 077$	$\cdot 9642\ 974$	$\cdot 9563\ 071$
$\cdot 94$	$\cdot 9877\ 834$	$\cdot 9859\ 895^+$	$\cdot 9840\ 451$	$\cdot 9819\ 475^-$	$\cdot 9772\ 844$	$\cdot 9719\ 880$
$\cdot 95$	$\cdot 9930\ 936$	$\cdot 9920\ 487$	$\cdot 9909\ 099$	$\cdot 9896\ 750^-$	$\cdot 9869\ 074$	$\cdot 9837\ 306$
$\cdot 96$	$\cdot 9966\ 165^-$	$\cdot 9960\ 893$	$\cdot 9955\ 118$	$\cdot 9948\ 823$	$\cdot 9934\ 602$	$\cdot 9918\ 106$
$\cdot 97$	$\cdot 9986\ 779$	$\cdot 9984\ 660$	$\cdot 9982\ 326$	$\cdot 9979\ 768$	$\cdot 9973\ 945^+$	$\cdot 9967\ 120$
$\cdot 98$	$\cdot 9996\ 580$	$\cdot 9996\ 017$	$\cdot 9995\ 393$	$\cdot 9994\ 705^+$	$\cdot 9993\ 128$	$\cdot 9991\ 261$
$\cdot 99$	$\cdot 9999\ 677$	$\cdot 9999\ 622$	$\cdot 9999\ 561$	$\cdot 9999\ 494$	$\cdot 9999\ 338$	$\cdot 9999\ 152$
$\cdot 1.00$	$\cdot 1.0000\ 000$	$\cdot 1.0000\ 000$	$\cdot 1.0000\ 000$	$\cdot 1.0000\ 000$	$\cdot 1.0000\ 000$	$\cdot 1.0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION $x = .21$ to $.80$ $q = 3.5$ $p = 14$ to 19

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$B(p, q) = .2416\ 6032 \times \frac{1}{10^3}$	$.1933\ 2826 \times \frac{1}{10^3}$	$.1567\ 5264 \times \frac{1}{10^3}$	$.1286\ 1755 \times \frac{1}{10^3}$	$.1066\ 5846 \times \frac{1}{10^3}$	$.8929\ 5453 \times \frac{1}{10^4}$	
x						
.21	.0000 001					
.22	.0000 001					
.23	.0000 002					
.24	.0000 003	.0000 001				
.25	.0000 006	.0000 002				
.26	.0000 010	.0000 003	.0000 001			
.27	.0000 016	.0000 005-	.0000 002			
.28	.0000 025+	.0000 008	.0000 003	.0000 001		
.29	.0000 040	.0000 013	.0000 005-	.0000 001		
.30	.0000 062	.0000 022	.0000 007	.0000 003	.0000 001	
.31	.0000 095+	.0000 034	.0000 012	.0000 004	.0000 002	.0000 001
.32	.0000 144	.0000 053	.0000 020	.0000 007	.0000 003	.0000 001
.33	.0000 214	.0000 082	.0000 031	.0000 012	.0000 004	.0000 002
.34	.0000 315-	.0000 124	.0000 049	.0000 019	.0000 007	.0000 003
.35	.0000 456	.0000 185+	.0000 075-	.0000 030	.0000 012	.0000 005-
.36	.0000 654	.0000 273	.0000 113	.0000 046	.0000 019	.0000 008
.37	.0000 926	.0000 397	.0000 169	.0000 071	.0000 030	.0000 012
.38	.0001 298	.0000 572	.0000 250-	.0000 108	.0000 047	.0000 020
.39	.0001 801	.0000 814	.0000 365-	.0000 162	.0000 072	.0000 032
.40	.0002 474	.0001 146	.0000 527	.0000 240	.0000 109	.0000 049
.41	.0003 368	.0001 599	.0000 753	.0000 352	.0000 164	.0000 076
.42	.0004 544	.0002 210	.0001 066	.0000 510	.0000 243	.0000 115-
.43	.0006 079	.0003 026	.0001 494	.0000 732	.0000 357	.0000 173
.44	.0008 067	.0004 107	.0002 074	.0001 040	.0000 518	.0000 257
.45	.0010 620	.0005 528	.0002 855-	.0001 464	.0000 746	.0000 378
.46	.0013 878	.0007 381	.0003 895+	.0002 041	.0001 063	.0000 550-
.47	.0018 003	.0009 780	.0005 271	.0002 821	.0001 500+	.0000 793
.48	.0023 191	.0012 862	.0007 078	.0003 867	.0002 100	.0001 134
.49	.0029 673	.0016 793	.0009 430	.0005 258	.0002 914	.0001 605+
.50	.0037 719	.0021 773	.0012 472	.0007 094	.0004 010	.0002 254
.51	.0047 645-	.0028 041	.0016 377	.0009 499	.0005 475+	.0003 138
.52	.0059 814	.0035 878	.0021 356	.0012 625+	.0007 418	.0004 333
.53	.0074 645+	.0045 614+	.0027 663	.0016 662	.0009 974	.0005 937
.54	.0092 616	.0057 635+	.0035 597	.0021 837	.0013 314	.0008 073
.55	.0114 268	.0072 390	.0045 518	.0028 420	.0017 648	.0010 895-
.56	.0140 208	.0090 391	.0057 843	.0036 768	.0023 231	.0014 597
.57	.0171 117	.0112 226	.0073 063	.0047 252	.0030 376	.0019 421
.58	.0207 749	.0138 561	.0091 744	.0060 347	.0039 459	.0025 661
.59	.0250 933	.0170 147	.0114 539	.0076 604	.0050 931	.0033 680
.60	.0301 574	.0207 819	.0142 191	.0096 661	.0065 326	.0043 914
.61	.0360 653	.0252 507	.0175 543	.0121 259	.0083 277	.0056 889
.62	.0429 220	.0305 228	.0215 541	.0151 246	.0105 522	.0073 235-
.63	.0508 394	.0367 095-	.0263 240	.0187 588	.0132 918	.0093 693
.64	.0599 350-	.0439 304	.0319 802	.0231 372	.0166 453	.0119 135-
.65	.0703 308	.0523 134	.0386 502	.0283 815+	.0207 253	.0150 575+
.66	.0821 523	.0619 939	.0464 718	.0346 266	.0256 590	.0189 184
.67	.0955 263	.0731 126	.0555 926	.0420 201	.0315 892	.0236 298
.68	.1105 785-	.0858 147	.0661 688	.0507 222	.0386 739	.0293 431
.69	.1274 313	.1002 469	.0783 635-	.0609 046	.0470 864	.0362 276
.70	.1462 007	.1165 548	.0923 441	.0727 485-	.0570 144	.0444 708
.71	.1669 923	.1348 796	.1082 796	.0864 427	.0686 584	.0542 779
.72	.1898 980	.1553 538	.1263 367	.1021 800	.0822 294	.0658 699
.73	.2149 913	.1780 969	.1466 752	.1201 534	.0979 452	.0794 816
.74	.2423 225+	.2032 099	.1694 426	.1405 505-	.1160 262	.0953 576
.75	.2719 143	.2307 695+	.1947 679	.1635 477	.1366 892	.1137 475+
.76	.3037 557	.2608 222	.2227 545+	.1893 025+	.1601 403	.1348 987
.77	.3377 976	.2933 770	.2534 726	.2179 451	.1865 660	.1590 483
.78	.3739 471	.3283 990	.2869 502	.2495 686	.2161 231	.1864 122
.79	.4120 629	.3658 020	.3231 650-	.2842 187	.2489 265-	.2171 733
.80	.4519 505+	.4054 421	.3620 343	.3218 820	.2850 364	.2514 660

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

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 $x = .81$ to 1.00 $q = 3.5$ $p = 14$ to 19

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$B(p, q) = .2416\ 6032 \times \frac{1}{10^8}$	$.1933\ 2826 \times \frac{1}{10^8}$	$.1567\ 5264 \times \frac{1}{10^8}$	$.1286\ 1755 \times \frac{1}{10^8}$	$.1066\ 5846 \times \frac{1}{10^8}$	$.8929\ 5453 \times \frac{1}{10^4}$	
x						
.81	.4933 593	.4471 111	.4034 066	.3624 746	.3244 440	.2893 607
.82	.5359 795 ⁺	.4905 316	.4470 531	.4058 300	.3670 560	.3308 454
.83	.5794 418	.5353 528	.4926 598	.4516 879	.4126 803	.3758 073
.84	.6233 181	.5811 487	.5398 228	.4996 850 ⁻	.4610 110	.4240 129
.85	.6671 248	.6274 193	.5880 446	.5493 467	.5116 163	.4750 911
.86	.7103 298	.6735 937	.6367 352	.6000 839	.5639 286	.5285 164
.87	.7523 619	.7190 394	.6852 170	.6511 938	.6172 407	.5835 988
.88	.7926 245 ⁺	.7630 744	.7327 364	.7018 674	.6707 079	.6394 791
.89	.8305 141	.8049 870	.7784 814	.7512 055 ⁻	.7233 599	.6951 354
.90	.8654 429	.8440 602	.8216 084	.7982 445 ⁺	.7741 247	.7494 020
.91	.8968 671	.8796 049	.8612 783	.8419 952	.8218 671	.8010 065 ⁺
.92	.9243 195 ⁻	.9109 993	.8967 022	.8814 938	.8654 444	.8486 282
.93	.9474 471	.9377 360	.9271 994	.9158 692	.9037 826	.8909 809
.94	.9660 518	.9594 755 ⁻	.9522 634	.9444 248	.9359 729	.9269 247
.95	.9801 321	.9761 032	.9716 378	.9667 328	.9613 878	.9556 048
.96	.9899 224	.9877 860	.9853 933	.9827 374	.9798 127	.9766 151
.97	.9959 227	.9950 203	.9939 991	.9928 537	.9915 793	.9901 715 ⁺
.98	.9989 079	.9986 559	.9983 677	.9980 412	.9976 742	.9972 646
.99	.9998 932	.9998 675 ⁻	.9998 378	.9998 039	.9997 653	.9997 219
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .33$ to $.90$ $q = 3.5$ $p = 20$ to 25

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$B(p, q) = .7540\ 5050 \times \frac{1}{10^4}$	$.6417\ 4510 \times \frac{1}{10^4}$	$.5500\ 6723 \times \frac{1}{10^4}$	$.4745\ 6781 \times \frac{1}{10^4}$	$.4118\ 8904 \times \frac{1}{10^4}$	$.3594\ 6680 \times \frac{1}{10^4}$	
β						
.33	.0000 001					
.34	.0000 001					
.35	.0000 002	.0000 001				
.36	.0000 003	.0000 001				
.37	.0000 005 ⁺	.0000 002	.0000 001			
.38	.0000 009	.0000 004	.0000 002	.0000 001		
.39	.0000 014	.0000 006	.0000 003	.0000 001		
.40	.0000 022	.0000 010	.0000 004	.0000 002	.0000 001	
.41	.0000 035 ⁻	.0000 016	.0000 007	.0000 003	.0000 001	.0000 001
.42	.0000 054	.0000 025 ⁺	.0000 012	.0000 005 ⁺	.0000 003	.0000 001
.43	.0000 083	.0000 040	.0000 019	.0000 009	.0000 004	.0000 002
.44	.0000 126	.0000 062	.0000 030	.0000 015 ⁻	.0000 007	.0000 003
.45	.0000 190	.0000 095 ⁺	.0000 048	.0000 024	.0000 012	.0000 006
.46	.0000 283	.0000 145 ⁺	.0000 074	.0000 038	.0000 019	.0000 010
.47	.0000 417	.0000 218	.0000 114	.0000 059	.0000 031	.0000 016
.48	.0000 609	.0000 325 ⁺	.0000 173	.0000 092	.0000 048	.0000 025 ⁺
.49	.0000 880	.0000 480	.0000 261	.0000 141	.0000 076	.0000 041
.50	.0001 260	.0000 701	.0000 389	.0000 214	.0000 118	.0000 065 ⁻
.51	.0001 789	.0001 015 ⁺	.0000 574	.0000 323	.0000 181	.0000 101
.52	.0002 519	.0001 457	.0000 839	.0000 481	.0000 275 ⁺	.0000 157
.53	.0003 516	.0002 073	.0001 216	.0000 711	.0000 414	.0000 240
.54	.0004 870	.0002 924	.0001 748	.0001 041	.0000 618	.0000 365 ⁺
.55	.0006 692	.0004 091	.0002 491	.0001 510	.0000 912	.0000 549
.56	.0009 126	.0005 680	.0003 520	.0002 172	.0001 336	.0000 819
.57	.0012 355 ⁻	.0007 824	.0004 934	.0003 099	.0001 940	.0001 210
.58	.0016 606	.0010 697	.0006 862	.0004 385 ⁻	.0002 792	.0001 772
.59	.0022 162	.0014 518	.0009 471	.0006 154	.0003 985 ⁺	.0002 572
.60	.0029 376	.0019 563	.0012 974	.0008 571	.0005 643	.0003 703
.61	.0038 675 ⁺	.0026 176	.0017 643	.0011 847	.0007 927	.0005 287
.62	.0050 583	.0034 783	.0023 822	.0016 253	.0011 050 ⁺	.0007 489
.63	.0065 729	.0045 910	.0031 937	.0022 134	.0015 287	.0010 524
.64	.0084 866	.0060 193	.0042 522	.0029 927	.0020 991	.0014 676
.65	.0108 887	.0078 403	.0056 229	.0040 179	.0028 612	.0020 310
.66	.0138 842	.0101 464	.0073 857	.0053 566	.0038 718	.0027 898
.67	.0175 954	.0130 409	.0096 367	.0070 922	.0052 020	.0038 037
.68	.0221 633	.0166 708	.0124 912	.0093 262	.0069 400	.0051 484
.69	.0277 491	.0211 678	.0160 860	.0121 811	.0091 939	.0069 180
.70	.0345 350 ⁻	.0267 105 ⁺	.0205 813	.0158 034	.0120 953	.0092 292
.71	.0427 242	.0334 958	.0261 635 ⁺	.0203 661	.0158 024	.0122 248
.72	.0525 412	.0417 449	.0330 403	.0260 715 ⁻	.0205 038	.0160 775 ⁻
.73	.0642 297	.0517 040	.0414 718	.0331 534	.0264 210	.0209 943
.74	.0780 505 ⁻	.0636 422	.0517 108	.0418 783	.0338 113	.0272 199
.75	.0942 773	.0778 493	.0640 615 ⁻	.0525 455 ⁺	.0429 698	.0350 399
.76	.1131 910	.0946 308	.0788 459	.0654 861	.0542 290	.0447 824
.77	.1350 716	.1143 019	.0964 052	.0810 589	.0679 578	.0568 191
.78	.1601 886	.1371 773	.1170 917	.0996 446	.0845 567	.0715 623
.79	.1887 876	.1635 598	.1412 573	.1216 361	.1044 505 ⁺	.0894 597
.80	.2210 759	.1937 248	.1692 391	.1474 246	.1280 760	.1109 848
.81	.2572 041	.2279 014	.2013 406	.1773 815 ⁺	.1558 653	.1366 217
.82	.2972 458	.2662 502	.2378 080	.2118 352	.1882 224	.1668 431
.83	.3411 757	.3088 385 ⁻	.2788 034	.2510 414	.2254 943	.2020 815 ⁻
.84	.3888 453	.3556 119	.3243 724	.2951 494	.2679 338	.2426 914
.85	.4399 596	.4063 652	.3744 105 ⁻	.3441 624	.3156 569	.2889 033
.86	.4940 548	.4607 132	.4286 258	.3978 949	.3685 936	.3407 696
.87	.5504 792	.5180 635 ⁻	.4865 044	.4559 280	.4264 350 ⁻	.3981 033
.88	.6083 819	.5775 956	.5472 784	.5175 676	.4885 802	.4604 140
.89	.6667 103	.6382 497	.6099 043	.5818 102	.5540 885 ⁺	.5268 463
.90	.7242 238	.6987 308	.6730 558	.6473 224	.6216 450 ⁻	.5961 280

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

95

 $x = .91$ to 1.00 $q = 3.5$ $p = 20$ to 25

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$B(p, q) = .7540\ 5050 \times \frac{x}{101}$		$.6417\ 4510 \times \frac{x}{101}$	$.5500\ 6723 \times \frac{x}{101}$	$.4745\ 6781 \times \frac{x}{101}$	$.4118\ 8904 \times \frac{x}{101}$	$.3594\ 6680 \times \frac{x}{101}$
x						
.91	.7795 256	.7575 345 ⁺	.7351 403	.7124 458	.6895 490	.6665 425 ⁻
.92	.8311 216	.8130 023	.7943 481	.7752 360	.7557 416	.7359 386
.93	.8775 088	.8634 136	.8487 445 ⁻	.8335 520	.8178 872	.8018 014
.94	.9173 002	.9071 224	.8964 162	.8852 089	.8735 288	.8614 060
.95	.9493 881	.9427 440	.9356 807	.9282 080	.9203 373	.9120 813
.96	.9731 415 ⁺	.9693 900	.9653 599	.9610 512	.9564 654	.9516 043
.97	.9886 263	.9869 400	.9851 096	.9831 323	.9810 059	.9787 284
.98	.9968 103	.9963 095 ⁻	.9957 602	.9951 608	.9945 095 ⁻	.9938 047
.99	.9996 732	.9996 189	.9995 588	.9994 926	.9994 199	.9993 404
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$\mu = .55$ to 1.00

$q = 3.5$

$p = 38$ to 43

	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$(p, q) = .8782\ 1352 \times 10^5$		$.8041\ 4732 \times 10^5$	$.7379\ 2343 \times 10^5$	$.6785\ 5028 \times 10^5$	$.6251\ 8115 \times 10^5$	$.5770\ 9030 \times 10^5$
π						
.55	.0000 001					
.56	.0000 001	.0000 001				
.57	.0000 002	.0000 001	.0000 001			
.58	.0000 004	.0000 002	.0000 001	.0000 001	.0000 001	
.59	.0000 007	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001
.60	.0000 012	.0000 008	.0000 005	.0000 003	.0000 002	.0000 001
.61	.0000 022	.0000 014	.0000 009	.0000 006	.0000 004	.0000 002
.62	.0000 038	.0000 025 [†]	.0000 017	.0000 011	.0000 007	.0000 005 [—]
.63	.0000 066	.0000 044	.0000 029	.0000 020	.0000 013	.0000 009
.64	.0000 113	.0000 077	.0000 052	.0000 035 [†]	.0000 024	.0000 016
.65	.0000 190	.0000 131	.0000 090	.0000 062	.0000 043	.0000 029
.66	.0000 318	.0000 223	.0000 156	.0000 100	.0000 076	.0000 053
.67	.0000 526	.0000 374	.0000 265 [†]	.0000 188	.0000 133	.0000 094
.68	.0000 860	.0000 620	.0000 447	.0000 321	.0000 231	.0000 160
.69	.0001 303	.0001 010	.0000 743	.0000 543	.0000 396	.0000 288
.70	.0002 232	.0001 656	.0001 228	.0000 909	.0000 672	.0000 496
.71	.0003 542	.0002 666	.0002 003	.0001 504	.0001 127	.0000 844
.72	.0005 565 [†]	.0004 246	.0003 245 [†]	.0002 162	.0001 871	.0001 421
.73	.0008 657	.0006 695 [†]	.0005 171	.0003 989	.0003 074	.0002 366
.74	.0013 344	.0010 451	.0008 181	.0006 396	.0004 995 [†]	.0003 896
.75	.0020 346	.0016 151	.0012 810	.0010 139	.0008 031	.0006 348
.76	.0030 708	.0024 797	.0019 853	.0015 934	.0012 773	.0010 220
.77	.0045 911	.0037 413	.0030 450 [†]	.0024 754	.0020 100	.0016 303
.78	.0067 953	.0056 676	.0046 219	.0038 040	.0031 288	.0025 701
.79	.0099 557	.0083 181	.0069 414	.0057 859	.0048 174	.0040 067
.80	.0144 358	.0122 092	.0103 137	.0087 026	.0073 351	.0061 759
.81	.0207 120	.0177 287	.0151 524	.0129 445 [†]	.0110 428	.0094 166
.82	.0293 969	.0254 614	.0220 274	.0190 356	.0164 327	.0141 713
.83	.0412 609	.0361 549	.0316 436	.0276 660	.0241 633	.0210 830
.84	.0572 485 [†]	.0507 375 [†]	.0449 177	.0397 234	.0350 943	.0309 743
.85	.0784 823	.0703 380	.0629 716	.0563 188	.0503 191	.0449 158
.86	.1062 465	.0962 693	.0871 390	.0787 961	.0711 838	.0642 475
.87	.1419 372	.1299 932	.1180 358	.1087 147	.0992 860	.0906 543
.88	.1869 663	.1730 318	.1590 843	.1477 830	.1363 921	.1257 715
.89	.2426 009	.2268 135 [†]	.2118 620	.1977 245 [†]	.1843 730	.1717 838
.90	.3097 262	.2924 318	.2758 749	.2600 195	.2449 186	.2304 998
.91	.3885 226	.3703 240	.3527 017	.3356 641	.3192 120	.3033 515 [†]
.92	.4780 674	.4598 129	.4419 423	.4244 747	.4074 222	.3908 020
.93	.5759 023	.5586 514	.5415 296	.5247 106	.5080 658	.4916 648
.94	.6776 599	.6625 580	.6474 541	.6323 682	.6173 227	.6023 382
.95	.7769 223	.7649 660	.7529 396	.7407 702	.7285 944	.7161 583
.96	.8855 894	.8754 587	.8649 157	.8540 807	.8429 516	.8322 746
.97	.9351 409	.9307 368	.9261 908	.9215 057	.9166 840	.9117 286
.98	.9792 071	.9776 338	.9759 931	.9742 848	.9725 085 [†]	.9706 642
.99	.9975 577	.9973 531	.9971 377	.9969 110	.9966 730	.9964 233
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

99

$p = 44$ to 50

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$p, q) = \cdot 5336\ 5339 \times \frac{1}{10^8}$	$\cdot 4943\ 3156 \times \frac{1}{10^8}$	$\cdot 4586\ 5815 \times \frac{1}{10^8}$	$\cdot 4262\ 2778 \times \frac{1}{10^8}$	$\cdot 3966\ 8724 \times \frac{1}{10^8}$	$\cdot 3697\ 2791 \times \frac{1}{10^8}$	$\cdot 3450\ 7938 \times \frac{1}{10^8}$	
60	0000 001	0000 001					
61	0000 002	0000 001	0000 001				
62	0000 003	0000 002	0000 001	0000 001	0000 001		
63	0000 006	0000 004	0000 003	0000 002	0000 001	0000 001	
64	0000 011	0000 007	0000 005	0000 003	0000 002	0000 001	
65	0000 020	0000 014	0000 009	0000 006	0000 004	0000 003	
66	0000 037	0000 026	0000 018	0000 012	0000 009	0000 006	
67	0000 066	0000 047	0000 033	0000 023	0000 016	0000 011	
68	0000 119	0000 085	0000 061	0000 043	0000 031	0000 022	
69	0000 210	0000 152	0000 110	0000 080	0000 058	0000 042	
70	0000 366	0000 270	0000 198	0000 146	0000 107	0000 079	
71	0000 631	0000 472	0000 352	0000 263	0000 196	0000 146	
72	0001 078	0000 816	0000 618	0000 467	0000 353	0000 266	
73	0001 819	0001 397	0001 072	0000 821	0000 629	0000 481	
74	0003 036	0002 363	0001 838	0001 428	0001 108	0000 859	
75	0005 012	0003 953	0003 115	0002 452	0001 929	0001 516	
76	0008 182	0006 538	0005 220	0004 163	0003 317	0002 641	
77	0013 210	0010 693	0008 647	0006 986	0005 639	0004 548	
78	0021 090	0017 288	0014 159	0011 585	0009 470	0007 735 ⁺	
79	0033 290	0027 632	0022 914	0018 984	0015 715	0012 997	
80	0051 947	0043 652	0036 646	0030 738	0025 759	0021 569	
81	0080 117	0068 143	0057 904	0049 160	0041 701	0035 345	
82	0122 091	0105 087	0090 370	0077 645	0066 656	0057 175 ⁺	
83	0183 776	0160 047	0139 257	0121 063	0105 159	0091 272	
84	0273 123	0240 614	0211 790	0186 262	0163 678	0143 719	
85	0400 559	0356 904	0317 735	0282 632	0251 207	0223 105 ⁺	
86	0579 354	0521 987	0469 909	0422 689	0379 919	0341 222	
87	0825 773	0752 163	0684 564	0622 557	0565 742	0513 738	
88	1158 819	1066 846	0981 414	0902 147	0828 682	0760 666	
89	1599 279	1487 767	1383 007	1284 704	1192 560	1106 281	
90	2167 683	2037 079	1913 005	1795 269	1683 670	1578 000	
91	2880 788	2733 909	2592 825	2457 460	2327 725 ⁺	2203 518	
92	3746 220	3588 906	3436 137	3287 951	3144 367	3005 391	
93	4755 250 ⁺	4596 622	4440 901	4288 211	4138 656	3992 325	
94	5874 338	5726 276	5579 366	5433 765	5289 620	5147 067	
95	7037 475 ⁺	6912 874	6787 927	6662 776	6537 559	6412 407	
96	8143 588	8053 133	7961 472	7868 695 ⁺	7774 892	7680 150 ⁺	
97	9066 423	9014 283	8960 898	8906 300	8850 523	8793 601	
98	9687 516	9667 708	9647 218	9626 046	9604 194	9581 663	
99	9961 617	9958 880	9956 020	9953 035 ⁺	9949 923	9946 681	
00	10000 000	10000 000	10000 000	10000 000	10000 000	10000 000	

TABLES OF THE INCOMPLETE β -FUNCTION $x = .01$ to $.60$ $q = 4$ $p = 4$ to 6.5

	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$
$B(p, q) = .7142\ 8571 \times \frac{1}{10^8}$	$.4972\ 8050 \times \frac{1}{10^8}$	$.3571\ 4286 \times \frac{1}{10^8}$	$.2632\ 6615 \times \frac{1}{10^8}$	$.1984\ 1270 \times \frac{1}{10^8}$	$.1524\ 1724 \times \frac{1}{10^8}$	
.01	.0000 003					
.02	.0000 053	.0000 010	.0000 002			
.03	.0000 264	.0000 058	.0000 013	.0000 003	.0000 001	
.04	.0000 813	.0000 207	.0000 052	.0000 013	.0000 003	.0000 001
.05	.0001 936	.0000 551	.0000 154	.0000 042	.0000 012	.0000 003
.06	.0003 915-	.0001 220	.0000 373	.0000 113	.0000 033	.0000 010
.07	.0007 072	.0002 379	.0000 786	.0000 256	.0000 082	.0000 026
.08	.0011 763	.0004 228	.0001 493	.0000 519	.0000 178	.0000 060
.09	.0018 366	.0006 997	.0002 619	.0000 965+	.0000 351	.0000 126
.10	.0027 280 ^e	.0010 948	.0004 316	.0001 676	.0000 642	.0000 243
.11	.0038 916	.0016 369	.0006 765+	.0002 754	.0001 106	.0000 439
.12	.0053 693	.0023 572	.0010 169	.0004 322	.0001 813	.0000 752
.13	.0072 028	.0032 889	.0014 759	.0006 525+	.0002 847	.0001 228
.14	.0094 339	.0044 670	.0020 790	.0009 533	.0004 315+	.0001 931
.15	.0121 032	.0059 276	.0028 539	.0013 539	.0006 340	.0002 936
.16	.0152 503	.0077 080	.0038 303	.0018 757	.0009 068	.0004 335-
.17	.0189 131	.0098 458	.0050 399	.0025 425+	.0012 664	.0006 238
.18	.0231 276	.0123 790	.0065 160	.0033 805+	.0017 318	.0008 773
.19	.0279 276	.0153 452	.0082 929	.0044 178	.0023 240	.0012 091
.20	.0333 440 ^e	.0187 815+	.0104 064 ^e	.0056 843	.0030 664	.0016 360
.21	.0394 053	.0227 243	.0128 926	.0072 118	.0039 844	.0021 773
.22	.0461 368	.0272 084	.0157 883	.0090 337	.0051 056	.0028 544
.23	.0535 606	.0322 673	.0191 302	.0111 847	.0064 598	.0036 908
.24	.0616 955-	.0379 325-	.0229 548	.0137 004	.0080 784	.0047 125-
.25	.0705 566	.0442 333	.0272 980	.0166 173	.0099 945+	.0059 475-
.26	.0801 558	.0511 967	.0321 948	.0199 724	.0122 430	.0074 259
.27	.0905 009	.0588 469	.0376 789	.0238 028	.0148 598	.0091 799
.28	.1015 962	.0672 052	.0437 826	.0281 456	.0178 821	.0112 435-
.29	.1134 424	.0762 897	.0505 362	.0330 373	.0213 477	.0136 523
.30	.1260 360 ^e	.0861 154	.0579 676	.0385 136	.0252 948	.0164 436
.31	.1393 702	.0966 937	.0661 027	.0446 090	.0297 621	.0196 557
.32	.1534 344	.1080 324	.0749 644	.0513 568	.0347 877	.0233 281
.33	.1682 141	.1201 357	.0845 724	.0587 880	.0404 096	.0275 007
.34	.1836 917	.1330 038	.0949 435-	.0669 319	.0466 645-	.0322 141
.35	.1998 457	.1466 333	.1060 909	.0758 150-	.0535 882	.0375 087
.36	.2166 517	.1610 168	.1180 242	.0854 611	.0612 147	.0434 246
.37	.2340 816	.1761 428	.1307 490	.0958 908	.0695 762	.0500 012
.38	.2521 046	.1919 964	.1442 673	.1071 215+	.0787 022	.0572 769
.39	.2706 869	.2085 583	.1585 766	.1191 669	.0886 197	.0652 882
.40	.2897 920 ^e	.2258 059	.1736 704 ^e	.1320 365-	.0993 526	.0740 700
.41	.3093 807	.2437 124	.1895 380	.1457 360	.1109 212	.0836 546
.42	.3294 116	.2622 478	.2061 644	.1602 666	.1233 422	.0940 716
.43	.3498 411	.2813 784	.2235 301	.1756 252	.1366 281	.1053 473
.44	.3706 237	.3010 672	.2416 115+	.1918 036	.1507 869	.1175 044
.45	.3917 122	.3212 740	.2603 807	.2087 894	.1658 220	.1305 615-
.46	.4130 579	.3419 558	.2798 056	.2265 650-	.1817 320	.1445 326
.47	.4346 107	.3630 666	.2998 501	.2451 079	.1985 102	.1594 270
.48	.4563 199	.3845 578	.3204 741	.2643 908	.2161 445-	.1752 488
.49	.4781 337	.4053 787	.3416 336	.2843 817	.2346 175+	.1919 967
.50	.5000 000 ^e	.4284 763	.3632 812	.3050 434	.2539 062	.2096 634
.51	.5218 663	.4507 960	.3853 661	.3263 342	.2739 820	.2282 357
.52	.5436 801	.4732 815+	.4078 342	.3482 078	.2948 105-	.2476 940
.53	.5653 893	.4958 754	.4306 287	.3706 135+	.3163 517	.2680 126
.54	.5869 421	.5185 191	.4536 899	.3934 963	.3385 600	.2891 591
.55	.6082 878	.5411 538	.4769 563	.4167 973	.3613 846	.3110 944
.56	.6293 763	.5637 198	.5003 614	.4404 540	.3847 601	.3337 729
.57	.6501 589	.5861 581	.5238 478	.4644 003	.4086 522	.3571 427
.58	.6705 884	.6084 094	.5473 412	.4885 673	.4329 677	.3811 453
.59	.6906 193	.6304 154	.5707 766	.5128 835+	.4576 451	.4057 158
.60	.7102 080 ^e	.6521 187	.5940 864 ^e	.5372 751	.4826 097	.4307 838

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION

101

 $x = .61$ to 1.00 $q = 4$ $p = 4$ to 6.5

	$p = 4$	$p = 4.5$	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$
$B(p, q) = .7142\ 8571 \times \frac{1}{108}$	$.4972\ 8050 \times \frac{1}{108}$	$.3571\ 4286 \times \frac{1}{108}$	$.2632\ 6615 \times \frac{1}{108}$	$.1984\ 1270 \times \frac{1}{108}$	$.1524\ 1724 \times \frac{1}{108}$	
.61	.7293 131	.6734 633	.6172 027	.5616 666	.5077 830	.4562 729
.62	.7478 954	.6943 947	.6400 580	.5859 812	.5330 834	.4821 015-
.63	.7659 184	.7148 604	.6625 859	.6101 414	.5584 267	.5081 832
.64	.7833 483	.7348 104	.6847 209	.6340 695-	.5837 263	.5344 275+
.65	.8001 543	.7541 970	.7063 994	.6576 878	.6088 944	.5607 400
.66	.8163 083	.7729 754	.7275 601	.6809 200	.6338 421	.5870 234
.67	.8317 859	.7911 043	.7481 442	.7036 908	.6584 802	.6131 781
.68	.8465 656	.8085 455-	.7680 957	.7259 272	.6827 203	.6391 029
.69	.8606 298	.8252 646	.7873 623	.7475 588	.7064 750+	.6646 961
.70	.8739 640 ^e	.8412 313	.8058 956	.7685 183	.7296 591	.6898 560
.71	.8865 576	.8564 193	.8236 514	.7887 424	.7521 900	.7144 824
.72	.8984 038	.8708 067	.8405 901	.8081 721	.7739 888	.7384 769
.73	.9094 991	.8843 762	.8566 771	.8267 535-	.7949 811	.7617 445+
.74	.9198 442	.8971 151	.8718 832	.8444 379	.8150 974	.7841 944
.75	.9294 434	.9090 155-	.8861 847	.8611 831	.8342 743	.8057 411
.76	.9383 045+	.9200 744	.8995 638	.8769 531	.8524 552	.8263 051
.77	.9464 394	.9302 939	.9120 090	.8917 190	.8695 907	.8458 147
.78	.9538 632	.9396 809	.9235 147	.9054 591	.8856 398	.8642 063
.79	.9605 947	.9482 472	.9340 820	.9181 598	.9005 700	.8814 257
.80	.9666 560 ^e	.9560 096	.9437 184 ^e	.9298 150+	.9143 583	.8974 290
.81	.9720 724	.9629 896	.9524 378	.9404 273	.9269 914	.9121 834
.82	.9768 724	.9692 134	.9602 607	.9500 073	.9384 662	.9256 680
.83	.9810 869	.9747 115+	.9672 137	.9585 741	.9487 901	.9378 743
.84	.9847 497	.9795 188	.9733 297	.9661 552	.9579 813	.9488 068
.85	.9878 968	.9836 738	.9786 475+	.9727 861	.9660 685-	.9584 836
.86	.9905 661	.9872 188	.9832 113	.9785 104	.9730 910	.9669 360
.87	.9927 972	.9901 990	.9870 703	.9833 789	.9790 985-	.9742 088
.88	.9946 307	.9926 624	.9902 784	.9874 494	.9841 503	.9803 598
.89	.9961 084	.9946 588	.9928 932	.9907 862	.9883 149	.9854 595-
.90	.9972 720 ^e	.9962 399	.9949 756	.9934 584	.9916 689	.9895 896
.91	.9981 634	.9974 578	.9965 887	.9955 398	.9942 959	.9928 425-
.92	.9988 237	.9983 649	.9977 967	.9971 072	.9962 849	.9953 189
.93	.9992 928	.9990 128	.9986 641	.9982 388	.9977 287	.9971 263
.94	.9996 085+	.9994 512	.9992 544	.9990 129	.9987 217	.9983 760
.95	.9998 064	.9997 275+	.9996 282	.9995 058	.9993 574	.9991 803
.96	.9999 187	.9998 851	.9998 426	.9997 899	.9997 257	.9996 487
.97	.9999 736	.9999 626	.9999 485+	.9999 310	.9999 096	.9998 837
.98	.9999 947	.9999 924	.9999 895-	.9999 859	.9999 814	.9999 760
.99	.9999 997	.9999 995+	.9999 993	.9999 991	.9999 988	.9999 984
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .05$ to $.70$ $q = 4$ $p = 7$ to 9.5

$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$B(p, q) = .11904762 \times 10^5$					
x					
.05	.0000 001				
.06	.0000 003	.0000 001			
.07	.0000 008	.0000 003			
.08	.0000 020	.0000 007	.0000 002		
.09	.0000 045	.0000 016	.0000 006	.0000 002	
.10	.0000 091	.0000 034	.0000 012	.0000 005	.0000 001
.11	.0000 173	.0000 067	.0000 026	.0000 010	.0000 003
.12	.0000 308	.0000 125	.0000 051	.0000 020	.0000 008
.13	.0000 525	.0000 222	.0000 091	.0000 034	.0000 016
.14	.0000 856	.0000 376	.0000 161	.0000 051	.0000 026
.15	.0001 346	.0000 611	.0000 276	.0000 124	.0000 051
.16	.0002 051	.0000 962	.0000 448	.0000 207	.0000 085
.17	.0003 042	.0001 470	.0000 705	.0000 346	.0000 159
.18	.0004 401	.0002 188	.0001 070	.0000 528	.0000 257
.19	.0006 220	.0003 181	.0001 611	.0000 810	.0000 405
.20	.0008 644	.0004 527	.0002 352	.0001 214	.0000 622
.21	.0011 783	.0006 321	.0003 464	.0001 703	.0000 887
.22	.0015 804	.0008 674	.0004 724	.0002 255	.0001 144
.23	.0020 885	.0011 717	.0006 522	.0003 105	.0001 405
.24	.0027 228	.0015 508	.0008 867	.0004 307	.0002 007
.25	.0035 057	.0020 480	.0011 884	.0006 044	.0002 223
.26	.0044 618	.0026 582	.0015 716	.0008 228	.0003 124
.27	.0056 181	.0034 005	.0020 534	.0011 282	.0004 415
.28	.0070 039	.0043 266	.0026 526	.0015 152	.0006 388
.29	.0086 507	.0054 361	.0033 905	.0021 004	.0009 015
.30	.0105 921	.0067 668	.0042 900	.0027 025	.0012 629
.31	.0128 637	.0083 500	.0053 801	.0034 444	.0017 384
.32	.0155 020	.0102 103	.0066 870	.0043 465	.0023 630
.33	.0185 480	.0124 106	.0082 444	.0053 420	.0031 264
.34	.0220 422	.0149 620	.0100 828	.0065 501	.0040 265
.35	.0260 243	.0179 136	.0122 424	.0080 120	.0050 698
.36	.0305 370	.0213 670	.0147 600	.0101 507	.0062 701
.37	.0356 252	.0251 856	.0176 707	.0123 311	.0076 602
.38	.0413 301	.0295 039	.0210 424	.0148 665	.0092 650
.39	.0476 949	.0345 773	.0248 040	.0178 002	.0110 670
.40	.0547 619	.0401 818	.0292 815	.0212 045	.0130 444
.41	.0625 719	.0464 535	.0342 540	.0251 001	.0152 852
.42	.0711 643	.0534 480	.0398 575	.0295 455	.0177 660
.43	.0805 763	.0611 804	.0461 435	.0345 620	.0204 247
.44	.0908 427	.0697 243	.0531 643	.0402 045	.0233 005
.45	.1019 949	.0791 116	.0609 642	.0465 001	.0263 041
.46	.1140 612	.0893 816	.0695 918	.0534 644	.0294 600
.47	.1270 655	.1005 708	.0790 955	.0618 444	.0327 173
.48	.1410 272	.1127 123	.0893 181	.0706 877	.0361 405
.49	.1559 607	.1258 348	.1000 000	.0800 478	.0396 988
.50	.1718 750	.1399 626	.1112 812	.0911 721	.0538 607
.51	.1887 732	.1551 145	.1266 924	.1029 060	.0668 821
.52	.2066 520	.1713 030	.1441 028	.1156 913	.0795 602
.53	.2255 015	.1885 364	.1627 149	.1295 651	.0922 702
.54	.2453 048	.2068 120	.1743 651	.1445 502	.1050 272
.55	.2660 370	.2261 255	.1891 227	.1606 004	.1180 147
.56	.2876 693	.2464 586	.2060 805	.1780 042	.1321 000
.57	.3101 590	.2677 800	.2249 520	.1963 846	.1471 016
.58	.3334 628	.2900 844	.2450 150	.2161 440	.1631 045
.59	.3575 238	.3133 043	.2671 357	.2369 724	.1791 085
.60	.3822 806	.3373 991	.2902 843	.2589 960	.1952 286
.61	.4076 639	.3623 103	.3204 173	.2820 663	.2115 413
.62	.4335 970	.3879 704	.3484 804	.3062 647	.2277 280
.63	.4599 962	.4143 932	.3744 088	.3315 011	.2439 242
.64	.4867 716	.4412 240	.3981 272	.3577 136	.2601 202
.65	.5138 270	.4686 396	.4255 501	.3848 283	.2763 045
.66	.5410 612	.4964 494	.4535 820	.4127 500	.2924 216
.67	.5683 680	.5245 453	.4821 177	.4414 677	.3084 280
.68	.5950 374	.5528 130	.5110 427	.4706 639	.3243 370
.69	.6227 567	.5811 322	.5402 313	.5006 206	.3401 882
.70	.6496 107	.6093 785	.5695 623	.5305 105	.3559 526

TABLE I. THE $I_w(p, q)$ FUNCTION

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 $x = .71$ to 1.00 $q = 4$ $p = 7$ to 9.5

	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$R(p, q) = .11004762 \times 10^4$		$.01353531 \times 10^4$	$.75757576 \times 10^4$	$.01534911 \times 10^4$	$.50505051 \times 10^4$	$.41843740 \times 10^4$
.71	.6760836	.6374233	.5988890	.5608266	.5235206	.4872487
.72	.6720599	.6631400	.6280740	.5912685	.5548303	.5191943
.73	.67274230	.6624830	.6360714	.60214905 [†]	.5662547	.5314897
.74	.67520691	.67100455	.6554310	.6315375 [†]	.6176308	.5839569
.75	.67958751	.67449681	.67134945 [†]	.6811564	.6487786	.6164063
.76	.6857513	.67999490	.6749442	.7101882	.6705133	.6486393
.77	.6920966	.6841545	.67667052	.7384654	.7006466	.6804502
.78	.69811291	.68712581	.67919480	.7658234	.7389900	.7116290
.79	.70408392	.69099121	.68160407	.7921926	.7673576	.7419646
.80	.71001291	.69399624	.68388608	.8171516	.7945689	.7712483
.81	.71600730	.69787470	.68602680	.8408301	.8204525 [†]	.7992777
.82	.72166569	.7016982	.68902561	.8630114	.8448495 [†]	.8258606
.83	.72758528	.70527647	.69206556	.8845853	.8676168	.8508196
.84	.73369424	.70875084	.6951354	.9024613	.8886315 [†]	.8739963
.85	.73990392	.71207156	.6982551	.9195715 [†]	.9077937	.8952559
.86	.74600458	.71524880	.70139967	.9348721	.9250303	.9144919
.87	.752086952	.71825487	.70557655 [†]	.9483468	.9402983	.9316302
.88	.75766612	.72112415 [†]	.70938920	.9600677	.9535873	.9466329
.89	.76324038	.72385407	.7124417	.9668974	.9649218	.9595010
.90	.76872048	.7264507	.71514652	.9780886	.9743625 [†]	.9702809
.91	.77411662	.72892550	.7180007	.9846845 [†]	.9820669	.9760574
.92	.77941652	.73129144	.72113567	.9908173	.98791882	.9850624
.93	.78469239	.73359142	.72456007	.9964954	.9924734	.9911682
.94	.78994902	.73583010	.7282622	.9994996	.9956587	.9948852
.95	.79519915	.73792594	.732347	.99981271	.9977636	.9973545
.96	.79995534	.73999955	.73684266	.9999841	.9999218	.99988382
.97	.80469559	.74204166	.7417214	.99997256	.9999666	.9999666
.98	.80949969	.7440418	.74699528	.99999424	.99999304	.99999166
.99	.81429995	.74604175	.75269962	.99999962	.99999954	.99999944
1.00	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .11$ to $.70$ $q = 4$ $p = 10$ to 14

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$B(p, q) = .3496\ 5035 \times \frac{1}{10^8}$	$.2944\ 5595 \times \frac{1}{10^8}$	$.2497\ 5025 \times \frac{1}{10^8}$	$.1831\ 5018 \times \frac{1}{10^8}$	$.1373\ 6264 \times \frac{1}{10^8}$	$.1050\ 4202 \times \frac{1}{10^8}$	
x						
.11	.0000 001					
.12	.0000 001					
.13	.0000 003	.0000 001				
.14	.0000 006	.0000 002	.0000 001			
.15	.0000 011	.0000 005	.0000 002			
.16	.0000 020	.0000 009	.0000 004	.0000 001		
.17	.0000 035	.0000 016	.0000 008	.0000 002		
.18	.0000 060	.0000 029	.0000 014	.0000 003	.0000 001	
.19	.0000 099	.0000 049	.0000 024	.0000 006	.0000 001	
.20	.0000 161	.0000 081	.0000 041	.0000 010	.0000 002	.0000 001
.21	.0000 253	.0000 131	.0000 067	.0000 018	.0000 005	.0000 001
.22	.0000 390	.0000 206	.0000 108	.0000 030	.0000 008	.0000 002
.23	.0000 587	.0000 317	.0000 171	.0000 049	.0000 014	.0000 004
.24	.0000 868	.0000 479	.0000 263	.0000 079	.0000 023	.0000 007
.25	.0001 261	.0000 710	.0000 398	.0000 124	.0000 038	.0000 011
.26	.0001 802	.0001 035	.0000 592	.0000 191	.0000 061	.0000 019
.27	.0002 536	.0001 484	.0000 864	.0000 290	.0000 096	.0000 031
.28	.0003 520	.0002 096	.0001 243	.0000 432	.0000 148	.0000 050
.29	.0004 820	.0002 921	.0001 762	.0000 634	.0000 225	.0000 079
.30	.0006 520	.0004 018	.0002 465	.0000 917	.0000 336	.0000 122
.31	.0008 717	.0005 459	.0003 404	.0001 307	.0000 495	.0000 185
.32	.0011 530	.0007 334	.0004 645	.0001 841	.0000 719	.0000 278
.33	.0015 095	.0009 748	.0006 268	.0002 561	.0001 031	.0000 410
.34	.0019 572	.0012 826	.0008 369	.0003 521	.0001 461	.0000 599
.35	.0025 146	.0016 715	.0011 062	.0004 789	.0002 044	.0000 862
.36	.0032 028	.0021 585	.0014 485	.0006 447	.0002 829	.0001 227
.37	.0040 459	.0027 635	.0018 795	.0008 593	.0003 875	.0001 726
.38	.0050 712	.0035 092	.0024 180	.0011 348	.0005 253	.0002 402
.39	.0063 089	.0044 213	.0030 854	.0014 854	.0007 053	.0003 309
.40	.0077 930	.0055 291	.0039 064	.0019 278	.0009 385	.0004 514
.41	.0095 608	.0068 652	.0049 091	.0024 818	.0012 377	.0006 100
.42	.0116 532	.0084 661	.0061 252	.0031 702	.0016 189	.0008 169
.43	.0141 149	.0103 720	.0075 903	.0040 196	.0021 004	.0010 847
.44	.0169 939	.0126 270	.0093 442	.0050 603	.0027 042	.0014 283
.45	.0203 418	.0152 794	.0114 305	.0063 268	.0034 559	.0018 659
.46	.0242 138	.0183 811	.0138 976	.0078 579	.0043 851	.0024 190
.47	.0286 678	.0219 881	.0167 979	.0096 975	.0055 260	.0031 130
.48	.0337 648	.0261 599	.0201 881	.0118 941	.0069 176	.0039 777
.49	.0395 680	.0309 594	.0241 294	.0145 013	.0086 041	.0050 477
.50	.0461 426	.0364 526	.0286 865	.0175 781	.0106 354	.0063 629
.51	.0535 551	.0427 082	.0339 282	.0211 886	.0130 670	.0079 692
.52	.0618 728	.0497 968	.0399 264	.0254 018	.0159 608	.0099 186
.53	.0711 627	.0577 903	.0467 556	.0302 919	.0193 847	.0122 698
.54	.0814 908	.0667 614	.0544 926	.0359 375	.0234 128	.0150 886
.55	.0929 213	.0767 824	.0632 154	.0424 213	.0281 253	.0184 480
.56	.1055 154	.0879 241	.0730 024	.0498 295	.0336 084	.0224 284
.57	.1193 300	.1002 553	.0839 312	.0582 509	.0399 538	.0271 176
.58	.1344 168	.1138 406	.0960 776	.0677 763	.0472 578	.0326 108
.59	.1508 209	.1287 401	.1095 141	.0784 965	.0556 210	.0390 098
.60	.1685 797	.1450 070	.1243 088	.0905 019	.0651 467	.0464 229
.61	.1877 210	.1626 871	.1405 231	.1038 804	.0759 403	.0549 637
.62	.2082 624	.1818 164	.1582 109	.1187 157	.0881 069	.0647 500
.63	.2302 093	.2024 201	.1774 161	.1350 855	.1017 502	.0759 024
.64	.2535 542	.2245 107	.1981 713	.1530 594	.1169 699	.0885 424
.65	.2782 749	.2480 866	.2204 957	.1726 965	.1338 596	.1027 902
.66	.3043 339	.2731 307	.2443 933	.1940 432	.1525 044	.1187 620
.67	.3316 770	.2996 086	.2698 512	.2171 306	.1729 772	.1365 675
.68	.3602 327	.3274 678	.2968 377	.2419 722	.1953 366	.1563 061
.69	.3899 116	.3566 364	.3253 010	.2685 612	.2196 230	.1780 633
.70	.4206 056	.3870 219	.3551 674	.2968 679	.2458 559	.2019 070

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION $x = .71$ to 1.00 $q = 4$ $p = 10$ to 14

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$H(p, q) = .34965035 \times 10^{-1}$		$.20445595 \times 10^{-1}$	$.24975925 \times 10^{-1}$	$.18315018 \times 10^{-1}$	$.13736204 \times 10^{-1}$	$.10504202 \times 10^{-1}$
x						
.71	.4521885	.4185114	.3863406	.3268381	.2749207	.2278832
.72	.4845154	.4509704	.4187006	.3583004	.3041112	.2560115
.73	.5174238	.4842435	.4521043	.3914146	.3360362	.2862807
.74	.5507345	.5181546	.4863704	.4257705	.3697063	.3186448
.75	.5842527	.5525082	.5214300	.4612860	.4049871	.3530181
.76	.6177609	.5861005	.5557675	.4977616	.4417059	.3892723
.77	.6516664	.6206216	.5904277	.5349617	.4796507	.4272320
.78	.6859147	.6550034	.6250664	.5726251	.5185700	.4666770
.79	.7196031	.6890847	.6604141	.6104628	.5581734	.5073320
.80	.7527344	.7229209	.6951869	.6481621	.5981343	.5488762
.81	.7854105	.7559015	.7294057	.6854012	.6386029	.5909401
.82	.8176382	.7884770	.7624820	.7218051	.6776615	.6314104
.83	.8494274	.8205461	.7950641	.7570519	.7164315	.6740362
.84	.8808611	.8522548	.8275820	.7907817	.7510821	.7100370
.85	.9119974	.8838008	.8594024	.8246552	.7869807	.7475640
.86	.9428822	.9150401	.8910670	.8584537	.8217456	.7834639
.87	.9735663	.9461442	.9220641	.8909039	.8556159	.8200953
.88	.10040499	.9771464	.9529344	.9241349	.8903786	.8601747
.89	.10339668	.10097428	.9853800	.9587002	.9266305	.8983135
.90	.10635304	.10393450	.10155671	.9844444	.9515038	.9235994
.91	.10928301	.10686108	.10450220	.10220008	.9890444	.9566512
.92	.11218744	.10976200	.10741418	.10512004	.10265844	.9950056
.93	.11506724	.11274320	.11041010	.10824673	.10578044	.10326600
.94	.11792450	.11560200	.11326300	.11092601	.10856417	.10614580
.95	.12076020	.11844000	.11609500	.11378427	.11132061	.10889024
.96	.12357543	.12125800	.11891400	.11659555	.11406806	.11155044
.97	.12637219	.12405800	.12171400	.11939524	.11686807	.11435014
.98	.12915140	.12684000	.12449500	.12218570	.11967509	.11715010
.99	.13191414	.12960600	.12726000	.12496875	.12247815	.12007866
1.00	1.30000000	1.26000000	1.22000000	1.18000000	1.14000000	1.10000000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .22$ to $.80$ $q = 4$ $p = 15$ to 20

	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$B(p, q) = .8169\ 9346 \times 10^6$	$.6449\ 9484 \times 10^6$	$.5159\ 9587 \times 10^6$	$.4177\ 1004 \times 10^6$	$.3417\ 6350 \times 10^6$	$.2823\ 2632 \times 10^6$	$.2323\ 2632 \times 10^6$
x						
.22	.0000 001					
.23	.0000 001					
.24	.0000 002	.0000 001				
.25	.0000 003	.0000 001				
.26	.0000 006	.0000 002	.0000 001			
.27	.0000 010	.0000 003	.0000 001			
.28	.0000 017	.0000 006	.0000 002	.0000 001		
.29	.0000 027	.0000 009	.0000 003	.0000 001		
.30	.0000 041	.0000 015	.0000 005	.0000 002	.0000 001	
.31	.0000 068	.0000 025	.0000 009	.0000 003	.0000 001	
.32	.0000 106	.0000 040	.0000 015	.0000 005	.0000 002	.0000 001
.33	.0000 161	.0000 063	.0000 024	.0000 009	.0000 003	.0000 001
.34	.0000 243	.0000 097	.0000 039	.0000 015	.0000 006	.0000 002
.35	.0000 360	.0000 149	.0000 061	.0000 027	.0000 010	.0000 004
.36	.0000 526	.0000 224	.0000 094	.0000 040	.0000 016	.0000 007
.37	.0000 761	.0000 332	.0000 144	.0000 062	.0000 026	.0000 011
.38	.0001 087	.0000 487	.0000 216	.0000 096	.0000 042	.0000 017
.39	.0001 530	.0000 766	.0000 322	.0000 137	.0000 065	.0000 025
.40	.0002 138	.0001 013	.0000 473	.0000 200	.0000 095	.0000 037
.41	.0002 975	.0001 437	.0000 688	.0000 327	.0000 158	.0000 055
.42	.0004 070	.0002 018	.0000 990	.0000 482	.0000 233	.0000 082
.43	.0005 543	.0002 866	.0001 490	.0000 702	.0000 347	.0000 121
.44	.0007 466	.0003 866	.0001 986	.0001 012	.0000 482	.0000 169
.45	.0009 971	.0005 270	.0002 772	.0001 445	.0000 685	.0000 239
.46	.0013 268	.0007 145	.0003 834	.0002 132	.0001 000	.0000 359
.47	.0017 358	.0009 591	.0005 456	.0003 253	.0001 395	.0000 531
.48	.0022 641	.0012 771	.0007 145	.0004 968	.0002 109	.0000 780
.49	.0029 316	.0016 873	.0009 643	.0007 459	.0003 101	.0001 120
.50	.0037 680	.0022 125	.0012 884	.0009 748	.0004 272	.0001 483
.51	.0048 122	.0028 801	.0017 100	.0014 070	.0005 720	.0002 035
.52	.0061 034	.0037 227	.0022 526	.0018 511	.0007 872	.0002 791
.53	.0076 900	.0047 787	.0029 459	.0024 030	.0010 874	.0003 762
.54	.0096 304	.0060 035	.0038 254	.0031 843	.0014 762	.0005 092
.55	.0119 850	.0077 104	.0049 313	.0041 802	.0019 740	.0006 843
.56	.0148 260	.0097 172	.0064 193	.0054 815	.0026 122	.0009 272
.57	.0182 332	.0121 562	.0086 420	.0072 815	.0034 512	.0012 321
.58	.0222 051	.0151 154	.0101 701	.0094 101	.0045 220	.0016 130
.59	.0271 001	.0186 814	.0127 802	.00126 726	.0058 522	.0021 375
.60	.0327 813	.0229 593	.0159 612	.00150 213	.0075 813	.0028 220
.61	.0394 261	.0280 525	.0198 138	.0019 011	.0096 816	.0037 256
.62	.0471 657	.0340 829	.0244 507	.0024 249	.00123 428	.0049 625
.63	.0561 289	.0411 802	.0299 966	.0031 777	.00156 443	.0066 226
.64	.0664 502	.0494 835	.0365 887	.0040 797	.00206 403	.0088 256
.65	.0782 675	.0591 398	.0443 756	.0051 853	.00275 436	.00116 290
.66	.0917 200	.0703 027	.0535 169	.0064 812	.00364 472	.00156 325
.67	.1069 457	.0831 298	.0641 812	.0080 453	.00475 504	.00216 359
.68	.1240 781	.0977 800	.0765 443	.0098 558	.00615 536	.00296 393
.69	.1432 421	.1144 102	.0907 861	.0119 089	.00786 568	.00406 427
.70	.1645 505	.1331 710	.1070 868	.0143 037	.00986 598	.00546 461
.71	.1880 983	.1542 017	.1256 225	.017 505	.0121 265	.00716 495
.72	.2139 586	.1776 249	.1465 596	.0202 434	.0146 288	.00926 529
.73	.2421 761	.2035 405	.1700 482	.0241 813	.0176 311	.0121 265
.74	.2727 623	.2320 187	.1962 153	.0285 453	.0212 334	.0152 288
.75	.3056 892	.2630 931	.2251 560	.0335 253	.0254 357	.0186 311
.76	.3408 836	.2967 531	.2569 253	.0391 146	.0302 380	.0224 334
.77	.3782 223	.3329 364	.2915 282	.0454 172	.0354 403	.0266 357
.78	.4175 260	.3715 225	.3289 108	.0524 084	.0411 426	.0312 380
.79	.4585 606	.4123 253	.3689 508	.0600 381	.0474 449	.0362 403
.80	.5010 255	.4550 887	.4114 480	.0683 760	.0542 472	.0416 426

TABLES OF THE INCOMPLETE β -FUNCTION $x = .33$ to $.90$ $q = 4$ $p = 21$ to 26

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$B(p, q) = 2352.7197 \times \frac{1}{10^4}$	$1976.2840 \times \frac{1}{10^4}$	$1672.2408 \times \frac{1}{10^4}$	$1424.5013 \times \frac{1}{10^4}$	$1221.0012 \times \frac{1}{10^4}$	$1032.2573 \times \frac{1}{10^4}$	
x						
.33	.0000 001					
.34	.0000 001					
.35	.0000 002	.0000 001				
.36	.0000 003	.0000 001				
.37	.0000 005	.0000 002	.0000 001			
.38	.0000 008	.0000 003	.0000 001	.0000 001		
.39	.0000 013	.0000 006	.0000 003	.0000 001		
.40	.0000 021	.0000 010	.0000 003	.0000 002	.0000 001	
.41	.0000 034	.0000 016	.0000 007	.0000 003	.0000 002	.0000 001
.42	.0000 053	.0000 025 ⁺	.0000 012	.0000 006	.0000 003	.0000 001
.43	.0000 084	.0000 041	.0000 020	.0000 009	.0000 005	.0000 003
.44	.0000 129	.0000 064	.0000 032	.0000 016	.0000 008	.0000 004
.45	.0000 197	.0000 100	.0000 051	.0000 026	.0000 013	.0000 006
.46	.0000 297	.0000 154	.0000 080	.0000 041	.0000 021	.0000 011
.47	.0000 443	.0000 235 ⁺	.0000 124	.0000 065 ⁺	.0000 033	.0000 018
.48	.0000 654	.0000 355 ⁺	.0000 192	.0000 103	.0000 055 ⁺	.0000 029
.49	.0000 957	.0000 530	.0000 292	.0000 154	.0000 080 ⁺	.0000 043
.50	.0001 386	.0000 783	.0000 440	.0000 240	.0000 131 ⁺	.0000 075
.51	.0001 988	.0001 145 ⁺	.0000 650	.0000 375	.0000 211	.0000 121
.52	.0002 827	.0001 650	.0000 970	.0000 560	.0000 327	.0000 180
.53	.0003 984	.0002 383	.0001 410	.0000 841	.0000 507	.0000 262
.54	.0005 567	.0003 394	.0002 057	.0001 242	.0000 747	.0000 388
.55	.0007 714	.0004 785 ⁺	.0002 933 ⁺	.0001 817	.0001 113	.0000 670
.56	.0010 603	.0006 605 ⁺	.0004 208	.0002 644	.0001 642	.0001 020
.57	.0014 460	.0009 290	.0006 042	.0003 784	.0002 401	.0001 480
.58	.0019 567	.0012 788	.0008 410	.0005 300	.0003 128	.0002 247
.59	.0026 280	.0017 464	.0011 554	.0007 612	.0004 906	.0003 267
.60	.0035 034	.0023 668	.0015 918	.0010 661	.0007 111	.0004 720
.61	.0046 368	.0031 833	.0021 758	.0014 811	.0010 044	.0006 607
.62	.0060 932	.0042 500 ⁺	.0029 514	.0020 412	.0014 004	.0009 670
.63	.0079 512	.0056 320	.0039 732	.0027 912	.0019 444	.0013 624
.64	.0103 042	.0074 122	.0053 080	.0037 872	.0026 916	.0019 063
.65	.0132 620	.0096 847	.0070 417	.0050 007	.0036 206	.0026 458
.66	.0169 565 ⁺	.0125 056	.0092 725	.0068 155 ⁺	.0049 012	.0036 422
.67	.0215 344	.0161 008	.0121 224	.0090 400	.0067 184	.0049 253
.68	.0271 679	.0207 188	.0157 355	.0119 003	.0086 011	.0067 423
.69	.0340 504	.0263 326	.0202 814	.0155 602	.0118 002	.0086 602
.70	.0423 975 ⁺	.0332 405 ⁺	.0259 505 ⁺	.0200 027	.0156 000	.0112 070
.71	.0524 470	.0416 767	.0329 820	.0260 126	.0203 318	.0150 122
.72	.0644 557	.0519 005 ⁺	.0416 280	.0332 671	.0264 030	.0202 030
.73	.0786 971	.0641 945 ⁺	.0521 630	.0422 161	.0340 820	.0264 168
.74	.0954 552	.0788 605 ⁺	.0649 059	.0534 425 ⁺	.0434 144	.0344 802
.75	.1150 184	.0962 141	.0801 877	.0666 001	.0551 150	.0435 044
.76	.1376 690	.1165 759	.0983 591	.0827 085 ⁺	.0664 222	.0529 128
.77	.1636 721	.1402 607	.1197 758	.1019 450	.0864 000	.0711 264
.78	.1932 608	.1675 635 ⁺	.1447 863	.1247 028	.1070 205 ⁺	.0926 614
.79	.2266 190	.1987 413	.1737 147	.1513 640	.1315 015 ⁺	.1119 263
.80	.2638 622	.2339 933	.2068 397	.1822 833	.1560 827	.1300 800
.81	.3050 165 ⁺	.2734 366	.2443 688	.2177 527	.1841 000	.1544 050
.82	.3499 954	.3170 806	.2864 100	.2579 796	.2241 120	.1906 058
.83	.3985 783	.3647 094	.3320 397	.3030 470	.2701 117	.2342 874
.84	.4503 891	.4163 047	.3837 696	.3528 754	.3206 803	.2862 837
.85	.5048 790	.4711 213	.4385 144	.4071 834	.3752 232	.3407 081
.86	.5613 157	.5285 673	.4965 632	.4654 406	.4333 472	.4000 326
.87	.6187 813	.5877 437	.5570 588	.5268 800	.4971 412	.4658 619
.88	.6761 835 ⁺	.6475 370	.6188 905 ⁺	.5903 935 ⁺	.5621 813	.5313 258
.89	.7322 824	.7066 393	.6807 047	.6546 123	.6284 871	.6024 458
.90	.7857 378	.7635 914	.7409 416	.7178 980	.6945 661	.6720 480

TABLE I. THE $I_x(p, q)$ FUNCTION

109

 $x = .91$ to 1.00 $q = 4$ $p = 21$ to 26

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$B(p, q) =$	$.2352\ 7197 \times \frac{x}{10^4}$	$.1976\ 2846 \times \frac{x}{10^4}$	$.1672\ 2408 \times \frac{x}{10^4}$	$.1424\ 5014 \times \frac{x}{10^4}$	$.1221\ 0012 \times \frac{x}{10^4}$	$.1052\ 5873 \times \frac{x}{10^4}$
$\frac{x}{10^4}$						
.91	.8351 790	.8168 538	.7979 038	.7784 100	.7584 533	.7381 134
.92	.8792 996	.8649 078	.8498 618	.8342 140	.8180 185 ⁺	.8013 307
.93	.9169 745 ⁺	.9063 882	.8952 004	.8834 386	.8711 328	.8583 152
.94	.9473 964	.9402 432	.9326 023	.9244 830	.9158 968	.9068 573
.95	.9702 175 ⁺	.9659 094	.9612 586	.9562 641	.9509 261	.9452 466
.96	.9856 770	.9834 784	.9810 800	.9784 771	.9756 660	.9726 435 ⁺
.97	.9946 790	.9938 142	.9928 610	.9918 158	.9906 752	.9894 360
.98	.9987 660	.9985 541	.9983 182	.9980 568	.9977 686	.9974 523
.99	.9999 095 ⁻	.9998 931	.9998 746	.9998 540	.9998 310	.9998 055 ⁺
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .42$ to 1.00 $q = 4$ $p = 27$ to 32

	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$B(p, q) = .9122\ 4229 \times \frac{1}{10^8}$	$.7945\ 3361 \times \frac{1}{10^8}$	$.6952\ 1691 \times \frac{1}{10^8}$	$.6109\ 4819 \times \frac{1}{10^8}$	$.5390\ 7193 \times \frac{1}{10^8}$	$.4774\ 6371 \times \frac{1}{10^8}$	
x						
.42	.0000 001					
.43	.0000 001					
.44	.0000 002	.0000 001				
.45	.0000 003	.0000 002	.0000 001			
.46	.0000 006	.0000 003	.0000 001	.0000 001		
.47	.0000 009	.0000 005 ⁻	.0000 003	.0000 001	.0000 001	
.48	.0000 016	.0000 008	.0000 004	.0000 002	.0000 001	.0000 001
.49	.0000 026	.0000 014	.0000 008	.0000 004	.0000 002	.0000 001
.50	.0000 042	.0000 023	.0000 013	.0000 007	.0000 004	.0000 002
.51	.0000 068	.0000 038	.0000 021	.0000 012	.0000 007	.0000 004
.52	.0000 109	.0000 062	.0000 036	.0000 020	.0000 012	.0000 007
.53	.0000 171	.0000 100	.0000 058	.0000 034	.0000 020	.0000 011
.54	.0000 267	.0000 159	.0000 094	.0000 056	.0000 033	.0000 019
.55	.0000 413	.0000 250 ⁺	.0000 151	.0000 091	.0000 055 ⁻	.0000 033
.56	.0000 631	.0000 390	.0000 240	.0000 147	.0000 090	.0000 055 ⁻
.57	.0000 956	.0000 600	.0000 376	.0000 235 ⁻	.0000 146	.0000 091
.58	.0001 433	.0000 915 ⁺	.0000 583	.0000 370	.0000 235 ⁻	.0000 148
.59	.0002 129	.0001 383	.0000 896	.0000 579	.0000 373	.0000 240
.60	.0003 133	.0002 070	.0001 363	.0000 895 ⁻	.0000 586	.0000 383
.61	.0004 570	.0003 068	.0002 054	.0001 371	.0000 913	.0000 606
.62	.0006 607	.0004 507	.0003 066	.0002 079	.0001 407	.0000 949
.63	.0009 470	.0006 562	.0004 534	.0003 124	.0002 147	.0001 472
.64	.0013 457	.0009 470	.0006 646	.0004 651	.0003 246	.0002 261
.65	.0018 963	.0013 549	.0009 654	.0006 860	.0004 862	.0003 438
.66	.0026 500 ⁻	.0019 220	.0013 900	.0010 026	.0007 213	.0005 177
.67	.0036 730	.0027 033	.0019 841	.0014 523	.0010 604	.0007 725 ⁻
.68	.0050 496	.0037 707	.0028 078	.0020 853	.0015 448	.0011 418
.69	.0068 865 ⁺	.0052 158	.0039 395 ⁺	.0029 678	.0022 302	.0016 721
.70	.0093 166	.0071 556	.0054 808	.0041 871	.0031 910	.0024 263
.71	.0125 037	.0097 362	.0075 607	.0058 563	.0045 252	.0034 887
.72	.0166 478	.0131 392	.0103 424	.0081 203	.0063 604	.0049 707
.73	.0219 891	.0175 866	.0140 284	.0111 623	.0088 607	.0070 180
.74	.0288 121	.0233 460	.0188 678	.0152 110	.0122 344	.0098 186
.75	.0374 493	.0307 360	.0251 615 ⁻	.0205 481	.0167 421	.0136 113
.76	.0482 818	.0401 284	.0332 679	.0275 145 ⁺	.0227 047	.0186 955 ⁺
.77	.0617 381	.0519 502	.0436 061	.0365 165 ⁻	.0305 115 ⁺	.0254 403
.78	.0782 895 ⁻	.0666 811	.0566 565 ⁻	.0480 284	.0406 254	.0342 924
.79	.0984 400	.0848 464	.0729 569	.0625 925 ⁻	.0535 858	.0457 820
.80	.1227 108	.1070 044	.0930 931	.0808 127	.0700 060	.0605 240
.81	.1516 168	.1337 258	.1176 813	.1033 409	.0905 636	.0792 124
.82	.1856 356	.1655 636	.1473 411	.1308 529	.1159 805 ⁺	.1026 050 ⁺
.83	.2251 662	.2030 133	.1826 564	.1640 123	.1469 902	.1314 946
.84	.2704 796	.2464 610	.2241 238	.2034 195 ⁻	.1842 887	.1666 637
.85	.3216 599	.2961 210	.2720 871	.2495 449	.2284 680	.2088 189
.86	.3785 401	.3519 637	.3266 591	.3026 460	.2799 295 ⁺	.2585 028
.87	.4406 355 ⁺	.4136 383	.3876 342	.3626 702	.3387 797	.3159 836
.88	.5070 831	.4803 971	.4543 974	.4291 507	.4047 119	.3811 246
.89	.5765 947	.5510 308	.5258 413	.5011 034	.4768 850 ⁻	.4532 447
.90	.6474 392	.6238 304	.6003 059	.5769 437	.5538 150 ⁺	.5309 849
.91	.7174 684	.6965 940	.6755 631	.6544 451	.6333 060	.6122 079
.92	.7842 064	.7667 016	.7488 717	.7307 713	.7124 537	.6939 706
.93	.8450 193	.8312 802	.8171 338	.8026 168	.7877 658	.7726 178
.94	.8973 797	.8874 809	.8771 791	.8664 936	.8554 448	.8440 538
.95	.9392 284	.9328 760	.9261 945 ⁺	.9191 905 ⁺	.9118 713	.9042 452
.96	.9694 071	.9659 550 ⁻	.9622 858	.9583 991	.9542 947	.9499 731
.97	.9880 954	.9866 504	.9850 987	.9834 378	.9816 656	.9797 802
.98	.9971 065 ⁺	.9967 300	.9963 215 ⁺	.9958 798	.9954 036	.9948 918
.99	.9997 774	.9997 465 ⁻	.9997 125 ⁺	.9996 755 ⁻	.9996 351	.9995 913
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION

III

 $x = .49$ to 1.00 $q = 4$ $p = 33$ to 38

	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$	$p = 38$
$B(p, q) = .4244\ 1219 \times \frac{1}{10^8}$	$.3785\ 2979 \times \frac{1}{10^8}$	$.3386\ 8455 \times \frac{1}{10^8}$	$.3039\ 4767 \times \frac{1}{10^8}$	$.2735\ 5291 \times \frac{1}{10^8}$	$.2468\ 6482 \times \frac{1}{10^8}$	
x						
.49	.0000 001					
.50	.0000 001	.0000 001				
.51	.0000 002	.0000 001	.0000 001			
.52	.0000 004	.0000 002	.0000 001	.0000 001		
.53	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001	
.54	.0000 011	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001
.55	.0000 020	.0000 012	.0000 007	.0000 004	.0000 002	.0000 001
.56	.0000 033	.0000 020	.0000 012	.0000 007	.0000 004	.0000 003
.57	.0000 056	.0000 035	.0000 021	.0000 013	.0000 008	.0000 005
.58	.0000 093	.0000 059	.0000 037	.0000 023	.0000 014	.0000 009
.59	.0000 154	.0000 098	.0000 063	.0000 040	.0000 025 ⁺	.0000 016
.60	.0000 250	.0000 162	.0000 105 ⁺	.0000 068	.0000 044	.0000 028
.61	.0000 402	.0000 266	.0000 175 ⁺	.0000 115 ⁺	.0000 076	.0000 050
.62	.0000 639	.0000 429	.0000 288	.0000 193	.0000 129	.0000 086
.63	.0001 007	.0000 687	.0000 468	.0000 318	.0000 216	.0000 146
.64	.0001 571	.0001 089	.0000 753	.0000 520	.0000 358	.0000 247
.65	.0002 425 ⁺	.0001 707	.0001 199	.0000 841	.0000 588	.0000 411
.66	.0003 708	.0002 650	.0001 890	.0001 345	.0000 955 ⁺	.0000 678
.67	.0005 614	.0004 072	.0002 947	.0002 129	.0001 535 ⁺	.0001 105 ⁺
.68	.0008 420	.0006 196	.0004 550 ⁺	.0003 336	.0002 441	.0001 783
.69	.0012 508	.0009 338	.0006 957	.0005 173	.0003 840	.0002 845 ⁺
.70	.0018 408	.0013 937	.0010 531	.0007 942	.0005 979	.0004 494
.71	.0026 837	.0020 603	.0015 785 ⁺	.0012 072	.0009 216	.0007 023
.72	.0038 763	.0030 167	.0023 431	.0018 166	.0014 059	.0010 863
.73	.0055 467	.0043 751	.0034 443	.0027 066	.0021 231	.0016 627
.74	.0078 633	.0062 848	.0050 137	.0039 924	.0031 737	.0025 187
.75	.0110 431	.0089 418	.0072 268	.0058 303	.0046 957	.0037 757
.76	.0153 629	.0125 998	.0103 146	.0084 290	.0068 765	.0056 009
.77	.0211 693	.0175 817	.0145 756	.0120 624	.0099 660	.0082 208
.78	.0288 895	.0242 921	.0203 897	.0170 850	.0142 924	.0119 377
.79	.0390 389	.0332 277	.0282 317	.0239 466	.0202 793	.0171 472
.80	.0522 272	.0449 864	.0386 826	.0332 073	.0284 621	.0243 581
.81	.0691 560	.0602 697	.0524 368	.0455 482	.0395 035 ⁺	.0342 104
.82	.0906 088	.0798 777	.0703 018	.0617 764	.0542 031	.0474 894
.83	.1174 275 ⁺	.1046 904	.0931 858	.0828 185	.0734 966	.0651 320
.84	.1504 707	.1356 320	.1220 678	.1096 971	.0984 399	.0882 171
.85	.1905 513	.1736 123	.1579 437	.1434 839	.1301 688	.1179 332
.86	.2383 483	.2194 397	.2017 435 ⁺	.1852 203	.1698 262	.1555 138
.87	.2942 916	.2737 039	.2542 123	.2358 010	.2184 484	.2021 275 ⁺
.88	.3584 217	.3366 270	.3157 553	.2958 140	.2768 032	.2587 173
.89	.4302 324	.4078 895 ⁺	.3862 498	.3653 396	.3451 787	.3257 807
.90	.5085 114	.4864 466	.4648 360	.4437 194	.4231 307	.4030 984
.91	.5912 086	.5703 621	.5497 178	.5293 214	.5092 138	.4894 323
.92	.6753 720	.6567 058	.6380 176	.6193 508	.6007 462	.5822 422
.93	.7572 094	.7415 770	.7257 560	.7097 813	.6936 868	.6775 053
.94	.8323 425 ⁺	.8203 331	.8080 481	.7955 105	.7827 430	.7697 684
.95	.8963 212	.8881 090	.8796 191	.8708 624	.8618 502	.8525 945 ⁺
.96	.9454 355	.9406 833	.9357 188	.9305 442	.9251 627	.9195 776
.97	.9777 799	.9756 632	.9734 289	.9710 759	.9686 032	.9660 102
.98	.9943 432	.9937 567	.9931 312	.9924 656	.9917 591	.9910 105
.99	.9995 438	.9994 926	.9994 374	.9993 780	.9993 144	.9992 463
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

$x = .55$ to 1.00 $q = 4$ $p = 1.00$ to $.44$

$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$H(p, q) = .2233\ 5388 \times 10^4$	$.2025\ 7678 \times 10^4$	$.1841\ 6071 \times 10^4$	$.1677\ 2082 \times 10^4$	$.1534\ 1017 \times 10^4$	$.1411\ 6043 \times 10^4$
x					
.55	.0000 001	.0000 001	.0000 001	.0000 001	.0000 001
.56	.0000 002	.0000 001	.0000 001	.0000 001	.0000 001
.57	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.58	.0000 006	.0000 003	.0000 001	.0000 001	.0000 001
.59	.0000 010	.0000 006	.0000 003	.0000 001	.0000 001
.60	.0000 018	.0000 012	.0000 006	.0000 003	.0000 001
.61	.0000 033	.0000 021	.0000 011	.0000 006	.0000 003
.62	.0000 057	.0000 038	.0000 021	.0000 012	.0000 006
.63	.0000 099	.0000 067	.0000 038	.0000 021	.0000 012
.64	.0000 160	.0000 109	.0000 067	.0000 038	.0000 021
.65	.0000 287	.0000 200	.0000 119	.0000 067	.0000 038
.66	.0000 480	.0000 349	.0000 219	.0000 119	.0000 067
.67	.0000 794	.0000 579	.0000 398	.0000 219	.0000 119
.68	.0001 300	.0000 946	.0000 638	.0000 398	.0000 219
.69	.0002 105	.0001 555	.0001 119	.0000 638	.0000 398
.70	.0003 372	.0002 526	.0001 890	.0001 119	.0000 638
.71	.0005 314	.0003 960	.0002 593	.0001 890	.0001 119
.72	.0008 380	.0006 453	.0004 396	.0002 593	.0001 890
.73	.0013 001	.0010 190	.0007 211	.0004 396	.0002 593
.74	.0019 957	.0015 790	.0012 475	.0007 211	.0004 396
.75	.0030 312	.0024 299	.00219 492	.0012 475	.0007 211
.76	.0045 549	.0036 688	.00339 994	.00219 492	.0012 475
.77	.0067 710	.0053 688	.0049 571	.00339 994	.00219 492
.78	.0099 560	.0078 913	.0072 875	.0049 571	.00339 994
.79	.0144 775	.0112 062	.0100 271	.0072 875	.0049 571
.80	.0208 157	.0177 638	.0159 190	.0100 271	.0072 875
.81	.0295 844	.0255 491	.0229 154	.0159 190	.0100 271
.82	.0415 406	.0361 041	.0326 615	.0229 154	.0159 190
.83	.0576 414	.0509 459	.0453 928	.0326 615	.0229 154
.84	.0789 520	.0705 700	.0630 052	.0453 928	.0326 615
.85	.1067 120	.0964 402	.0870 544	.0630 052	.0453 928
.86	.1422 334	.1290 137	.1185 637	.0870 544	.0630 052
.87	.1868 074	.1724 536	.1600 292	.1185 637	.0870 544
.88	.2415 452	.2252 711	.2109 870	.1600 292	.1185 637
.89	.3071 534	.2892 000	.2722 186	.2109 870	.1600 292
.90	.3836 460	.3647 922	.3465 512	.2722 186	.2109 870
.91	.4700 101	.4500 762	.4323 563	.3465 512	.2722 186
.92	.5638 745	.5436 764	.5256 768	.4323 563	.3465 512
.93	.6612 685	.6409 067	.6228 469	.5256 768	.4323 563
.94	.7566 005	.7432 886	.7298 278	.6228 469	.5256 768
.95	.8431 074	.8334 013	.8221 800	.7298 278	.6228 469
.96	.9137 926	.9078 118	.8996 396	.8221 800	.7298 278
.97	.9632 965	.9604 617	.9575 047	.8996 396	.8221 800
.98	.9962 190	.9963 836	.9989 015	.9575 047	.8996 396
.99	.9991 735	.9990 950	.9990 134	.9989 015	.9575 047
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLE I. THE $I_x(p, q)$ FUNCTION

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 $x = .59$ to 1.00 $q = 4$ $p = 45$ to 50

	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$B(p, q) =$	$.1284\ 8186 \times \frac{1}{10^8}$	$.1179\ 9354 \times \frac{1}{10^8}$	$.1085\ 5406 \times \frac{1}{10^8}$	$.1000\ 4002 \times \frac{1}{10^8}$	$.9234\ 4630 \times \frac{1}{10^8}$	$.8537\ 5224 \times \frac{1}{10^8}$
x						
.59	.0000 001					
.60	.0000 001	.0000 001	.0000 001			
.61	.0000 002	.0000 002	.0000 001	.0000 001		
.62	.0000 005 ⁻	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.63	.0000 009	.0000 006	.0000 004	.0000 003	.0000 002	.0000 001
.64	.0000 017	.0000 012	.0000 008	.0000 005 ⁺	.0000 004	.0000 002
.65	.0000 032	.0000 022	.0000 015 ⁺	.0000 010	.0000 007	.0000 005 ⁻
.66	.0000 059	.0000 041	.0000 029	.0000 020	.0000 014	.0000 010
.67	.0000 106	.0000 075 ⁺	.0000 054	.0000 038	.0000 027	.0000 019
.68	.0000 190	.0000 137	.0000 099	.0000 071	.0000 051	.0000 037
.69	.0000 335 ⁻	.0000 245 ⁺	.0000 179	.0000 131	.0000 096	.0000 070
.70	.0000 584	.0000 434	.0000 322	.0000 239	.0000 177	.0000 131
.71	.0001 006	.0000 758	.0000 571	.0000 429	.0000 322	.0000 242
.72	.0001 713	.0001 309	.0000 999	.0000 762	.0000 580	.0000 441
.73	.0002 884	.0002 234	.0001 728	.0001 336	.0001 031	.0000 795 ⁺
.74	.0004 796	.0003 765 ⁻	.0002 952	.0002 312	.0001 809	.0001 414
.75	.0007 882	.0006 270	.0004 982	.0003 954	.0003 135 ⁺	.0002 483
.76	.0012 802	.0010 316	.0008 304	.0006 678	.0005 364	.0004 304
.77	.0020 544	.0016 769	.0013 672	.0011 136	.0009 060	.0007 365 ⁻
.78	.0032 571	.0026 923	.0022 230	.0018 336	.0015 109	.0012 437
.79	.0051 008	.0042 689	.0035 689	.0029 806	.0024 868	.0020 728
.80	.0078 889	.0066 835 ⁺	.0056 564	.0047 822	.0040 391	.0034 083
.81	.0120 461	.0103 290	.0088 475 ⁺	.0075 709	.0064 722	.0055 277
.82	.0181 542	.0157 517	.0136 532	.0118 226	.0102 277	.0088 398
.83	.0269 915 ⁻	.0236 934	.0207 775 ⁺	.0182 029	.0159 323	.0139 324
.84	.0395 707	.0351 346	.0311 654	.0276 184	.0244 527	.0216 307
.85	.0571 679	.0513 313	.0460 466	.0412 679	.0369 521	.0330 591
.86	.0813 289	.0738 319	.0669 640	.0606 806	.0549 391	.0496 991
.87	.1138 336	.1044 561	.0957 657	.0877 224	.0802 873	.0734 228
.88	.1565 937	.1452 072	.1345 336	.1245 412	.1151 984	.1064 734
.89	.2114 532	.1980 852	.1854 117	.1734 124	.1620 655 ⁺	.1513 485 ⁺
.90	.2798 622	.2647 663	.2502 939	.2364 374	.2231 871	.2105 317
.91	.3624 072	.3461 226	.3303 371	.3150 554	.3002 799	.2860 110
.92	.4582 129	.4415 880	.4252 957	.4093 500 ⁻	.3937 630	.3785 451
.93	.5642 901	.5484 386	.5327 353	.5171 990	.5018 473	.4866 960
.94	.6750 121	.6611 668	.6473 034	.6334 400	.6195 939	.6057 817
.95	.7820 355 ⁻	.7712 860	.7604 080	.7494 142	.7383 174	.7271 300
.96	.8751 352	.8680 820	.8608 692	.8535 030	.8459 895 ⁻	.8383 349
.97	.9444 736	.9409 160	.9372 401	.9334 468	.9295 374	.9255 131
.98	.9845 207	.9834 058	.9822 419	.9810 285 ⁺	.9797 651	.9784 511
.99	.9986 299	.9985 199	.9984 038	.9982 816	.9981 531	.9980 180
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

to 70

$q = 4.5$

$p = 7.5$ to 10

$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$= .5452\ 8223 \times \frac{1}{10^3}$	$.4284\ 0156 \times \frac{1}{10^3}$	$.3408\ 0140 \times \frac{1}{10^3}$	$.2741\ 7700 \times \frac{1}{10^3}$	$.2228\ 3168 \times \frac{1}{10^3}$	$.1827\ 8467 \times \frac{1}{10^3}$
.0000 001					
.0000 004	.0000 001				
.0000 011	.0000 004	.0000 001			
.0000 026	.0000 009	.0000 003	.0000 001		
.0000 056	.0000 021	.0000 008	.0000 003	.0000 001	
.0000 111	.0000 044	.0000 017	.0000 007	.0000 003	.0000 001
.0000 205 ⁺	.0000 085 ⁻	.0000 035 ⁻	.0000 014	.0000 006	.0000 002
.0000 362	.0000 155 ⁺	.0000 066	.0000 028	.0000 012	.0000 005 ⁻
.0000 609	.0000 271	.0000 119	.0000 052	.0000 023	.0000 010
.0000 986	.0000 454	.0000 207	.0000 094	.0000 042	.0000 019
.0001 544	.0000 734	.0000 346	.0000 162	.0000 075 ⁺	.0000 035 ⁻
.0002 347	.0001 149	.0000 558	.0000 269	.0000 129	.0000 061
.0003 475 ⁻	.0001 750 ⁺	.0000 875 ⁻	.0000 434	.0000 214	.0000 105 ⁻
.0005 025 ⁺	.0002 599	.0001 334	.0000 680	.0000 344	.0000 173
.0007 115 ⁻	.0003 775 ⁻	.0001 987	.0001 038	.0000 539	.0000 278
.0009 883	.0005 371	.0002 896	.0001 550 ⁺	.0000 824	.0000 436
.0013 490	.0007 501	.0004 138	.0002 266	.0001 233	.0000 667
.0018 124	.0010 300	.0005 808	.0003 251	.0001 808	.0001 000
.0023 997	.0013 925 ⁺	.0008 018	.0004 584	.0002 604	.0001 470
.0031 350 ⁻	.0018 559	.0010 902	.0006 359	.0003 685 ⁺	.0002 123
.0040 449	.0024 410	.0014 617	.0008 692	.0005 135 ⁺	.0003 016
.0051 593	.0031 713	.0019 345 ⁻	.0011 718	.0007 053	.0004 220
.0065 104	.0040 734	.0025 293	.0015 597	.0009 556	.0005 821
.0081 336	.0051 766	.0032 699	.0020 512	.0012 786	.0007 924
.0100 667	.0065 134	.0041 828	.0026 677	.0016 907	.0010 654
.0123 503	.0081 189	.0052 976	.0034 332	.0022 111	.0014 158
.0150 271	.0100 315 ⁺	.0066 473	.0043 750 ⁺	.0028 616	.0018 610
.0181 421	.0122 923	.0082 677	.0055 235 ⁺	.0036 674	.0024 212
.0217 419	.0149 447	.0101 979	.0069 125 ⁻	.0046 568	.0031 195 ⁻
.0258 749	.0180 351	.0124 801	.0085 790	.0058 614	.0039 822
.0305 903	.0216 116	.0151 592	.0105 635 ⁻	.0073 166	.0050 394
.0359 379	.0257 244	.0182 831	.0129 098	.0090 610	.0063 245 ⁺
.0419 678	.0304 250 ⁻	.0219 020	.0156 648	.0111 372	.0078 748
.0487 297	.0357 659	.0260 683	.0188 786	.0135 912	.0097 313
.0562 722	.0418 003	.0308 362	.0226 039	.0164 724	.0119 392
.0646 425 ⁺	.0485 811	.0362 614	.0268 959	.0198 337	.0145 473
.0738 857	.0561 608	.0424 000	.0318 119	.0237 308	.0176 084
.0840 438	.0645 906	.0493 088	.0374 109	.0282 226	.0211 787
.0951 556	.0739 195 ⁺	.0570 439	.0437 529	.0333 698	.0253 178
.1072 557	.0841 943	.0656 605 ⁻	.0508 983	.0392 353	.0300 884
.1203 739	.0954 579	.0752 119	.0589 074	.0458 832	.0355 557
.1345 346	.1077 495 ⁺	.0857 489	.0678 394	.0533 781	.0417 869
.1497 561	.1211 032	.0973 187	.0777 517	.0617 861	.0488 507
.1660 502	.1355 474	.1099 643	.0886 992	.0711 646	.0568 163
.1834 214	.1511 043	.1237 237	.1007 329	.0815 842	.0657 528
.2018 664	.1677 889	.1386 287	.1138 995 ⁺	.0930 976	.0757 279
.2213 740	.1856 083	.1547 044	.1282 401	.1057 610	.0868 075 ⁺
.2419 242	.2045 615 ⁺	.1719 680	.1437 891	.1196 242	.0990 539
.2634 884	.2246 382	.1904 282	.1605 735 ⁻	.1347 305 ⁺	.1125 249
.2860 286	.2458 189	.2100 845 ⁺	.1786 115 ⁺	.1511 162	.1272 726
.3094 979	.2680 739	.2309 264	.1979 122	.1688 088	.1433 419
.3338 399	.2913 635 ⁻	.2529 328	.2184 738	.1878 263	.1607 695 ⁻
.3589 893	.3156 374	.2760 712	.2402 836	.2081 760	.1795 820
.3848 715 ⁺	.3408 348	.3002 979	.2633 169	.2298 531	.1997 952
.4114 035 ⁻	.3668 846	.3255 572	.2875 361	.2528 403	.2214 123
.4384 937	.3937 050 ⁻	.3517 811	.3128 906	.2771 064	.2444 229
.4660 429	.4212 042	.3788 901	.3393 165 ⁻	.3026 058	.2688 021
.4939 449	.4492 810	.4067 925 ⁺	.3607 359	.3292 782	.2945 090
.5220 870	.4778 250 ⁻	.4353 852	.3950 574	.3570 475 ⁻	.3214 863
.5503 513	.5067 176	.4645 540	.4241 762	.3858 223	.3496 596
.5786 153	.5358 330	.4941 745 ⁺	.4539 742	.4154 956	.3789 369
.6067 533	.5650 390	.5241 132	.4843 211	.4459 453	.4092 085 ⁺
.6346 377	.5941 985 ⁻	.5542 279	.5150 750 ⁺	.4770 345 ⁻	.4403 474
.6621 401	.6231 706	.5843 699	.5460 840	.5086 126	.4722 092
.6891 327	.6518 125 ⁻	.6143 849	.5771 867	.5405 165 ⁺	.5046 339

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71 \text{ to } 1.00$
$$q = 4.5$$
$$p = 7.51$$

	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$B(p, q) = .5452\ 8223 \times \frac{1}{10^8}$	$.4284\ 0156 \times \frac{1}{10^8}$	$.3408\ 0140 \times \frac{1}{10^8}$	$.2741\ 7700 \times \frac{1}{10^8}$	$.2228\ 3168 \times \frac{1}{10^8}$	$.1827\ 8467 \times \frac{1}{10^8}$	
$\cdot 71$	$\cdot 7154\ 901$	$\cdot 6799\ 806$	$\cdot 6441\ 151$	$\cdot 6082\ 150^-$	$\cdot 5725\ 722$	$\cdot 5374\ 460$
$\cdot 72$	$\cdot 7410\ 902$	$\cdot 7075\ 329$	$\cdot 6734\ 005^+$	$\cdot 6389\ 951$	$\cdot 6045\ 960$	$\cdot 5704\ 573$
$\cdot 73$	$\cdot 7658\ 165^+$	$\cdot 7343\ 300$	$\cdot 7020\ 818$	$\cdot 6693\ 502$	$\cdot 6363\ 976$	$\cdot 6034\ 678$
$\cdot 74$	$\cdot 7895\ 592$	$\cdot 7602\ 379$	$\cdot 7300\ 018$	$\cdot 6991\ 025^-$	$\cdot 6677\ 819$	$\cdot 6362\ 689$
$\cdot 75$	$\cdot 8122\ 167$	$\cdot 7851\ 292$	$\cdot 7570\ 080$	$\cdot 7280\ 761$	$\cdot 6985\ 519$	$\cdot 6686\ 458$
$\cdot 76$	$\cdot 8336\ 973$	$\cdot 8088\ 854$	$\cdot 7829\ 550^+$	$\cdot 7560\ 994$	$\cdot 7285\ 116$	$\cdot 7003\ 809$
$\cdot 77$	$\cdot 8539\ 207$	$\cdot 8313\ 987$	$\cdot 8077\ 068$	$\cdot 7830\ 082$	$\cdot 7574\ 695^+$	$\cdot 7312\ 573$
$\cdot 78$	$\cdot 8728\ 192$	$\cdot 8525\ 740$	$\cdot 8311\ 391$	$\cdot 8086\ 484$	$\cdot 7852\ 419$	$\cdot 7610\ 623$
$\cdot 79$	$\cdot 8903\ 389$	$\cdot 8723\ 306$	$\cdot 8531\ 419$	$\cdot 8328\ 792$	$\cdot 8116\ 564$	$\cdot 7895\ 923$
$\cdot 80$	$\cdot 9064\ 408$	$\cdot 8906\ 036$	$\cdot 8736\ 216$	$\cdot 8555\ 758$	$\cdot 8365\ 553$	$\cdot 8166\ 559$
$\cdot 81$	$\cdot 9211\ 018$	$\cdot 9073\ 458$	$\cdot 8925\ 031$	$\cdot 8766\ 322$	$\cdot 8597\ 997$	$\cdot 8420\ 794$
$\cdot 82$	$\cdot 9343\ 153$	$\cdot 9225\ 282$	$\cdot 9097\ 316$	$\cdot 8959\ 641$	$\cdot 8812\ 724$	$\cdot 8657\ 104$
$\cdot 83$	$\cdot 9460\ 915^+$	$\cdot 9361\ 419$	$\cdot 9252\ 743$	$\cdot 9135\ 108$	$\cdot 9008\ 814$	$\cdot 8874\ 223$
$\cdot 84$	$\cdot 9564\ 575^+$	$\cdot 9481\ 976$	$\cdot 9391\ 214$	$\cdot 9292\ 379$	$\cdot 9185\ 628$	$\cdot 9071\ 181$
$\cdot 85$	$\cdot 9654\ 572$	$\cdot 9587\ 268$	$\cdot 9512\ 872$	$\cdot 9431\ 377$	$\cdot 9342\ 832$	$\cdot 9247\ 339$
$\cdot 86$	$\cdot 9731\ 507$	$\cdot 9677\ 809$	$\cdot 9618\ 102$	$\cdot 9552\ 315^-$	$\cdot 9480\ 416$	$\cdot 9402\ 419$
$\cdot 87$	$\cdot 9796\ 133$	$\cdot 9754\ 305^-$	$\cdot 9707\ 528$	$\cdot 9655\ 686$	$\cdot 9598\ 700$	$\cdot 9536\ 523$
$\cdot 88$	$\cdot 9849\ 339$	$\cdot 9817\ 647$	$\cdot 9782\ 002$	$\cdot 9742\ 270$	$\cdot 9698\ 345^+$	$\cdot 9650\ 144$
$\cdot 89$	$\cdot 9892\ 136$	$\cdot 9868\ 888$	$\cdot 9842\ 590$	$\cdot 9813\ 112$	$\cdot 9780\ 337$	$\cdot 9744\ 167$
$\cdot 90$	$\cdot 9925\ 635^+$	$\cdot 9909\ 221$	$\cdot 9890\ 549$	$\cdot 9869\ 502$	$\cdot 9845\ 969$	$\cdot 9819\ 853$
$\cdot 91$	$\cdot 9951\ 016$	$\cdot 9939\ 949$	$\cdot 9927\ 290$	$\cdot 9912\ 942$	$\cdot 9896\ 810$	$\cdot 9878\ 807$
$\cdot 92$	$\cdot 9969\ 500^-$	$\cdot 9962\ 450^+$	$\cdot 9954\ 342$	$\cdot 9945\ 101$	$\cdot 9934\ 655^+$	$\cdot 9922\ 934$
$\cdot 93$	$\cdot 9982\ 315^-$	$\cdot 9978\ 135^-$	$\cdot 9973\ 301$	$\cdot 9967\ 763$	$\cdot 9961\ 468$	$\cdot 9954\ 366$
$\cdot 94$	$\cdot 9990\ 657$	$\cdot 9988\ 401$	$\cdot 9985\ 777$	$\cdot 9982\ 754$	$\cdot 9979\ 300$	$\cdot 9975\ 383$
$\cdot 95$	$\cdot 9995\ 654$	$\cdot 9994\ 581$	$\cdot 9993\ 328$	$\cdot 9991\ 876$	$\cdot 9990\ 208$	$\cdot 9988\ 307$
$\cdot 96$	$\cdot 9998\ 318$	$\cdot 9997\ 894$	$\cdot 9997\ 396$	$\cdot 9996\ 817$	$\cdot 9996\ 147$	$\cdot 9995\ 380$
$\cdot 97$	$\cdot 9999\ 513$	$\cdot 9999\ 388$	$\cdot 9999\ 240$	$\cdot 9999\ 067$	$\cdot 9998\ 867$	$\cdot 9998\ 635^+$
$\cdot 98$	$\cdot 9999\ 917$	$\cdot 9999\ 895^+$	$\cdot 9999\ 870$	$\cdot 9999\ 839$	$\cdot 9999\ 804$	$\cdot 9999\ 763$
$\cdot 99$	$\cdot 9999\ 996$	$\cdot 9999\ 995^+$	$\cdot 9999\ 994$	$\cdot 9999\ 992$	$\cdot 9999\ 991$	$\cdot 9999\ 989$
$I \cdot 00$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$	$I \cdot 0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

$q = 4.5$

$p = 10.5 \text{ to } 15$

0.5	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$0.721 \times \frac{1}{10^3}$	$1.260 \ 5839 \times \frac{1}{10^3}$	$1.8946 \ 0793 \times \frac{1}{10^4}$	$1.6506 \ 2395 \times \frac{1}{10^4}$	$1.4833 \ 2065 \times \frac{1}{10^4}$	$1.3657 \ 5617 \times \frac{1}{10^4}$
001					
002	0000 001				
004	0000 002				
008	0000 004	0000 001			
016	0000 007	0000 002			
029	0000 014	0000 003	0000 001		
051	0000 025	0000 006	0000 001		
087	0000 043	0000 011	0000 003		
143	0000 073	0000 019	0000 005	0000 001	
229	0000 120	0000 032	0000 009	0000 002	0000 001
359	0000 192	0000 054	0000 015 ⁺	0000 004	0000 001
550 ⁻	0000 301	0000 089	0000 026	0000 007	0000 002
825 ⁺	0000 461	0000 142	0000 043	0000 013	0000 004
216	0000 693	0000 222	0000 070	0000 022	0000 007
762	0001 024	0000 341	0000 112	0000 036	0000 012
511	0001 487	0000 514	0000 175 ⁻	0000 059	0000 019
527	0002 126	0000 762	0000 269	0000 093	0000 032
884	0002 996	0001 112	0000 406	0000 146	0000 052
677	0004 164	0001 598	0000 603	0000 225 ⁻	0000 083
017	0005 715 ⁻	0002 265 ⁻	0000 883	0000 340	0000 129
039	0007 750 ⁻	0003 168	0001 275 ⁻	0000 506	0000 198
900	0010 391	0004 379	0001 816	0000 743	0000 300
787	0013 785 ⁻	0005 982	0002 555 ⁺	0001 076	0000 448
915 ⁻	0018 103	0008 082	0003 552	0001 540	0000 659
531	0023 547	0010 807	0004 883	0002 176	0000 958
918	0030 352	0014 308	0006 641	0003 041	0001 375 ⁺
396	0038 784	0018 767	0008 941	0004 202	0001 951
324	0049 153	0024 394	0011 922	0005 748	0002 738
101	0061 803	0031 438	0015 749	0007 784	0003 802
169	0077 124	0040 185 ⁻	0020 622	0010 442	0005 225 ⁻
010	0095 550 ⁺	0050 964	0026 775 ⁺	0013 881	0007 112
150 ⁻	0117 558	0064 148	0034 483	0018 293	0009 591
155 ⁻	0143 673	0080 160	0044 064	0023 905 ⁺	0012 818
629	0174 403	0099 473	0055 885 ⁻	0030 989	0016 986
215 ⁺	0210 543	0122 611	0070 366	0039 862	0022 323
586	0252 567	0150 154	0087 981	0050 892	0029 103
443	0301 229	0182 733	0109 265 ⁺	0064 506	0037 651
508	0357 258	0221 033	0134 813	0081 192	0048 348
519	0421 412	0265 790	0165 284	0101 502	0061 637
217	0494 468	0317 787	0201 398	0126 059	0078 030
340	0577 218	0377 849	0243 940	0155 559	0098 112
612	0670 458	0446 838	0293 752	0190 772	0122 548
729	0774 975 ⁻	0525 643	0351 735 ⁻	0232 540	0152 084
347	0891 534	0615 170	0418 837	0281 781	0187 555 ⁻
071	1020 868	0716 331	0496 049	0339 479	0220 880
433	1163 660	0830 029	0584 393	0406 684	0280 067
886	1320 527	0957 143	0684 908	0484 501	0339 207
0782	1492 002	1098 511	0798 638	0574 079	0408 467
359	1678 520	1254 907	0926 607	0676 594	0489 084
726	1880 398	1427 026	1069 807	0793 237	0582 352
846	2097 815 ⁺	1615 456	1229 167	0925 187	0689 603
526	2330 800	1820 660	1405 533	1073 592	0812 188
402	2579 208	2042 947	1599 637	1239 534	0951 451
926	2842 713	2282 454	1812 070	1424 004	1108 699
4362	3120 787	2539 121	2043 250 ⁻	1627 863	1285 169
2777	3412 692	2812 665 ⁻	2293 391	1851 809	1481 984
2040	3717 473	3102 568	2562 475 ⁺	2096 334	1700 114
0817	4033 949	3408 052	2850 221	2361 689	1940 331
7584	4360 714	3728 070	3156 054	2647 840	2203 152

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to 1.00 $q = 4.5$ $p =$

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .1512\ 0721 \times \frac{1}{10^8}$	$.1260\ 5839 \times \frac{1}{10^8}$	$.8946\ 0793 \times \frac{1}{10^4}$	$.6506\ 2395 \times \frac{1}{10^4}$	$.4833\ 2065 \times \frac{1}{10^4}$	$.3657\ 1000 \times \frac{1}{10^4}$	
$.71$	.5030 626	.4696 140	.4061 294	.3479 088	.2954 430	.2488 100
$.72$	.5368 054	.5038 386	.4406 113	.3818 100	.3280 746	.2797 100
$.73$	.5707 826	.5385 407	.4760 632	.4171 521	.3625 687	.3127 100
$.74$	.6047 761	.5734 981	.5122 681	.4537 424	.3987 732	.3479 100
$.75$	.6385 574	.6084 726	.5489 832	.4913 529	.4364 932	.3850 100
$.76$	.6718 904	.6432 137	.5859 426	.5297 215	.4754 897	.4239 100
$.77$	.7045 353	.6774 622	.6228 601	.5685 539	.5154 799	.4643 100
$.78$	.7362 527	.7109 542	.6594 339	.6075 272	.5561 396	.5060 100
$.79$	.7668 083	.7434 267	.6953 516	.6462 949	.5971 062	.5485 100
$.80$	.7959 774	.7746 224	.7302 963	.6844 925 ⁺	.6379 841	.5914 100
$.81$	.8235 505 ⁻	.8042 960	.7639 535 ⁺	.7217 453	.6783 519	.6344 100
$.82$	.8493 381	.8322 197	.7960 192	.7576 769	.7177 713	.6768 100
$.83$	.8731 761	.8581 901	.8262 075 ⁻	.7919 194	.7557 982	.7183 100
$.84$	.8949 312	.8820 343	.8542 597	.8241 243	.7919 953	.7582 100
$.85$	.9145 049	.9036 156	.8799 534	.8539 743	.8259 469	.7961 100
$.86$	.9318 380	.9228 390	.9031 105 ⁺	.8811 954	.8572 742	.8315 100
$.87$	.9469 138	.9396 564	.9236 058	.9055 689	.8856 520	.8639 100
$.88$	.9597 606	.9540 697	.9413 739	.9269 430	.9108 248	.8930 100
$.89$	.9704 519	.9661 329	.9564 146	.9452 425 ⁺	.9326 224	.9185 100
$.90$	.9791 065 ⁺	.9759 530	.9687 964	.9604 769	.9509 735 ⁺	.9402 100
$.91$	.9858 853	.9836 873	.9786 572	.9727 446	.9659 157	.9581 100
$.92$	.9909 870	.9895 401	.9862 012	.9822 334	.9776 003	.9722 100
$.93$	.9946 407	.9937 545 ⁺	.9916 925 ⁺	.9892 156	.9862 918	.9828 100
$.94$	.9970 969	.9966 028	.9954 437	.9940 364	.9923 573	.9903 100
$.95$	.9986 153	.9983 729	.9977 996	.9970 961	.9962 479	.9952 100
$.96$	.9994 506	.9993 517	.9991 161	.9988 239	.9984 678	.9980 100
$.97$	.9998 370	.9998 069	.9997 345 ⁺	.9996 439	.9995 322	.9993 100
$.98$	.9999 716	.9999 662	.9999 531	.9999 366	.9999 160	.9998 100
$.99$	.9999 986	.9999 984	.9999 977	.9999 969	.9999 959	.9999 100
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 100

TABLES OF THE INCOMPLETE β -FUNCTION $x = .12$ to $.70$ $q = 4.5$ $p = 10.5$ to 15

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .1512\ 0721 \times \frac{1}{10^3}$	$.1260\ 5839 \times \frac{1}{10^3}$	$.8946\ 0793 \times \frac{1}{10^4}$	$.6506\ 2395 \times \frac{1}{10^4}$	$.4833\ 2065 \times \frac{1}{10^4}$	$.3657\ 5617 \times \frac{1}{10^4}$	
$\cdot 12$	.0000 001					
$\cdot 13$	.0000 002	.0000 001				
$\cdot 14$	.0000 004	.0000 002				
$\cdot 15$	.0000 008	.0000 004	.0000 001			
$\cdot 16$	.0000 016	.0000 007	.0000 002			
$\cdot 17$	.0000 029	.0000 014	.0000 003	.0000 001		
$\cdot 18$	.0000 051	.0000 025 ⁻	.0000 006	.0000 001		
$\cdot 19$	.0000 087	.0000 043	.0000 011	.0000 003		
$\cdot 20$	.0000 143	.0000 073	.0000 019	.0000 005 ⁻	.0000 001	
$\cdot 21$	.0000 229	.0000 120	.0000 032	.0000 009	.0000 002	.0000 001
$\cdot 22$	.0000 359	.0000 192	.0000 054	.0000 015 ⁺	.0000 004	.0000 001
$\cdot 23$	.0000 550 ⁻	.0000 301	.0000 089	.0000 026	.0000 007	.0000 002
$\cdot 24$	.0000 825 ⁺	.0000 461	.0000 142	.0000 043	.0000 013	.0000 004
$\cdot 25$	.0001 216	.0000 693	.0000 222	.0000 070	.0000 022	.0000 007
$\cdot 26$	.0001 762	.0001 024	.0000 341	.0000 112	.0000 036	.0000 012
$\cdot 27$	.0002 511	.0001 487	.0000 514	.0000 175 ⁻	.0000 059	.0000 019
$\cdot 28$	.0003 527	.0002 126	.0000 762	.0000 269	.0000 093	.0000 032
$\cdot 29$	.0004 884	.0002 996	.0001 112	.0000 406	.0000 146	.0000 052
$\cdot 30$	.0006 677	.0004 164	.0001 598	.0000 603	.0000 225 ⁻	.0000 083
$\cdot 31$	.0009 017	.0005 715 ⁻	.0002 265 ⁻	.0000 883	.0000 340	.0000 129
$\cdot 32$	.0012 039	.0007 750 ⁻	.0003 168	.0001 275 ⁻	.0000 506	.0000 198
$\cdot 33$	.0015 900	.0010 391	.0004 379	.0001 816	.0000 743	.0000 300
$\cdot 34$	.0020 787	.0013 785 ⁻	.0005 982	.0002 555 ⁺	.0001 076	.0000 448
$\cdot 35$	.0026 915 ⁻	.0018 103	.0008 082	.0003 552	.0001 540	.0000 659
$\cdot 36$	.0034 531	.0023 547	.0010 807	.0004 883	.0002 176	.0000 958
$\cdot 37$	.0043 918	.0030 352	.0014 308	.0006 641	.0003 041	.0001 375 ⁺
$\cdot 38$	.0055 396	.0038 784	.0018 767	.0008 941	.0004 202	.0001 951
$\cdot 39$	.0069 324	.0049 153	.0024 394	.0011 922	.0005 748	.0002 738
$\cdot 40$	.0086 101	.0061 803	.0031 438	.0015 749	.0007 784	.0003 802
$\cdot 41$	.0106 169	.0077 124	.0040 185 ⁻	.0020 622	.0010 442	.0005 225 ⁻
$\cdot 42$	.0130 010	.0095 550 ⁺	.0050 964	.0026 775 ⁺	.0013 881	.0007 112
$\cdot 43$	.0158 150 ⁻	.0117 558	.0064 148	.0034 483	.0018 293	.0009 591
$\cdot 44$	.0191 155 ⁻	.0143 673	.0080 160	.0044 064	.0023 905 ⁺	.0012 818
$\cdot 45$	.0229 629	.0174 463	.0099 473	.0055 885 ⁻	.0030 989	.0016 986
$\cdot 46$	.0274 215 ⁺	.0210 543	.0122 611	.0070 366	.0039 862	.0022 323
$\cdot 47$	.0325 586	.0252 567	.0150 154	.0087 981	.0050 892	.0029 103
$\cdot 48$	.0384 443	.0301 229	.0182 733	.0109 265 ⁺	.0064 506	.0037 651
$\cdot 49$	.0451 508	.0357 258	.0221 033	.0134 813	.0081 192	.0048 348
$\cdot 50$	.0527 519	.0421 412	.0265 790	.0165 284	.0101 502	.0061 637
$\cdot 51$	.0613 217	.0494 468	.0317 787	.0201 398	.0126 059	.0078 030
$\cdot 52$	.0709 340	.0577 218	.0377 849	.0243 940	.0155 559	.0098 112
$\cdot 53$	.0816 612	.0670 458	.0446 838	.0293 752	.0190 772	.0122 548
$\cdot 54$	.0935 729	.0774 975 ⁻	.0525 643	.0351 735 ⁻	.0232 540	.0152 084
$\cdot 55$	.1067 347	.0891 534	.0615 170	.0418 837	.0281 781	.0187 555 ⁻
$\cdot 56$	.1212 071	.1020 868	.0716 331	.0496 049	.0339 479	.0229 880
$\cdot 57$	.1370 433	.1163 660	.0830 029	.0584 393	.0406 684	.0280 067
$\cdot 58$	.1542 886	.1320 527	.0957 143	.0684 908	.0484 501	.0339 207
$\cdot 59$	.1729 782	.1492 002	.1098 511	.0798 638	.0574 079	.0408 467
$\cdot 60$	.1931 359	.1678 520	.1254 907	.0926 607	.0676 594	.0489 084
$\cdot 61$	.2147 726	.1880 398	.1427 026	.1069 807	.0793 237	.0582 352
$\cdot 62$	.2378 846	.2097 815 ⁺	.1615 456	.1229 167	.0925 187	.0689 603
$\cdot 63$	.2624 526	.2330 800	.1820 660	.1405 533	.1073 592	.0812 188
$\cdot 64$	.2884 402	.2579 208	.2042 947	.1599 637	.1239 534	.0951 451
$\cdot 65$	.3157 926	.2842 713	.2282 454	.1812 070	.1424 004	.1108 699
$\cdot 66$	.3444 362	.3120 787	.2539 121	.2043 250 ⁻	.1627 863	.1285 169
$\cdot 67$	.3742 777	.3412 692	.2812 665 ⁻	.2293 391	.1851 809	.1481 984
$\cdot 68$	.4052 040	.3717 473	.3102 568	.2562 475 ⁺	.2096 334	.1700 114
$\cdot 69$	.4370 817	.4033 949	.3408 052	.2850 221	.2361 689	.1940 331
$\cdot 70$.4697 584	.4360 714	.3728 070	.3156 054	.2647 840	.2203 152

TABLE I. THE $I_x(p, q)$ FUNCTION

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 $x = .71$ to 1.00 $q = 4.5$ $p = 10.5$ to 15

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .1512\ 0721 \times \frac{1}{10^8}$	$.1260\ 5839 \times \frac{1}{10^8}$	$.8946\ 0793 \times \frac{1}{10^4}$	$.6506\ 2395 \times \frac{1}{10^4}$	$.4833\ 2065 \times \frac{1}{10^4}$	$.3657\ 5617 \times \frac{1}{10^4}$	
.71	.5030 626	.4696 140	.4061 294	.3479 088	.2954 430	.2488 796
.72	.5368 054	.5038 386	.4406 113	.3818 100	.3280 746	.2797 128
.73	.5707 826	.5385 407	.4760 632	.4171 521	.3625 687	.3127 613
.74	.6047 761	.5734 981	.5122 681	.4537 424	.3987 732	.3479 267
.75	.6385 574	.6084 726	.5489 832	.4913 529	.4364 932	.3850 623
.76	.6718 904	.6432 137	.5859 426	.5297 215	.4754 897	.4239 695
.77	.7045 353	.6774 622	.6228 601	.5685 539	.5154 799	.4643 963
.78	.7362 527	.7109 542	.6594 339	.6075 272	.5561 396	.5060 367
.79	.7668 083	.7434 267	.6953 516	.6462 949	.5971 062	.5485 323
.80	.7959 774	.7746 224	.7302 963	.6844 925 ⁺	.6379 841	.5914 757
.81	.8235 505 ⁻	.8042 960	.7639 535 ⁺	.7217 453	.6783 519	.6344 162
.82	.8493 381	.8322 197	.7960 192	.7576 769	.7177 713	.6768 682
.83	.8731 761	.8581 901	.8262 075 ⁻	.7919 194	.7557 982	.7183 225 ⁻
.84	.8949 312	.8820 343	.8542 597	.8241 243	.7919 953	.7582 599
.85	.9145 049	.9036 156	.8799 534	.8539 743	.8259 469	.7961 678
.86	.9318 380	.9228 390	.9031 105 ⁺	.8811 954	.8572 742	.8315 589
.87	.9469 138	.9396 564	.9236 058	.9055 689	.8856 520	.8639 923
.88	.9597 606	.9540 697	.9413 739	.9269 430	.9108 248	.8930 947
.89	.9704 519	.9661 329	.9564 146	.9452 425 ⁺	.9326 224	.9185 825 ⁻
.90	.9791 065 ⁺	.9759 530	.9687 964	.9604 769	.9509 735 ⁺	.9402 822
.91	.9858 853	.9836 873	.9786 572	.9727 446	.9659 157	.9581 477
.92	.9909 870	.9895 401	.9862 012	.9822 334	.9776 003	.9722 722
.93	.9946 407	.9937 545 ⁺	.9916 925 ⁺	.9892 156	.9862 918	.9828 929
.94	.9970 969	.9966 028	.9954 437	.9940 364	.9923 573	.9903 844
.95	.9986 153	.9983 729	.9977 996	.9970 961	.9962 479	.9952 407
.96	.9994 506	.9993 517	.9991 161	.9988 239	.9984 678	.9980 405 ⁺
.97	.9998 370	.9998 069	.9997 345 ⁺	.9996 439	.9995 322	.9993 969
.98	.9999 716	.9999 662	.9999 531	.9999 366	.9999 160	.9998 908
.99	.9999 986	.9999 984	.9999 977	.9999 969	.9999 959	.9999 946
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .23$ to $.80$ $q = 4.5$ $p = 16$ to 21

	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$B(p, q) = .2813\ 5090 \times \frac{1}{10^4}$	$.2195\ 9094 \times \frac{1}{10^4}$	$.1736\ 3005 \times \frac{1}{10^4}$	$.1389\ 0404 \times \frac{1}{10^4}$	$.1123\ 0539 \times \frac{1}{10^4}$	$.9167\ 7872 \times \frac{1}{10^4}$	
x						
.23	.0000 001					
.24	.0000 001					
.25	.0000 002	.0000 001				
.26	.0000 004	.0000 001				
.27	.0000 006	.0000 002	.0000 001			
.28	.0000 011	.0000 004	.0000 001			
.29	.0000 018	.0000 006	.0000 002	.0000 001		
.30	.0000 030	.0000 011	.0000 004	.0000 001		
.31	.0000 048	.0000 018	.0000 007	.0000 002	.0000 001	
.32	.0000 077	.0000 029	.0000 011	.0000 004	.0000 002	.0000 001
.33	.0000 120	.0000 047	.0000 019	.0000 007	.0000 003	.0000 001
.34	.0000 184	.0000 075 ⁺	.0000 030	.0000 012	.0000 005 ⁻	.0000 002
.35	.0000 279	.0000 117	.0000 049	.0000 020	.0000 008	.0000 003
.36	.0000 417	.0000 180	.0000 077	.0000 033	.0000 014	.0000 006
.37	.0000 615 ⁺	.0000 273	.0000 120	.0000 052	.0000 023	.0000 010
.38	.0000 896	.0000 408	.0000 184	.0000 082	.0000 037	.0000 016
.39	.0001 290	.0000 602	.0000 279	.0000 128	.0000 058	.0000 026
.40	.0001 837	.0000 879	.0000 417	.0000 196	.0000 092	.0000 043
.41	.0002 587	.0001 268	.0000 617	.0000 297	.0000 142	.0000 068
.42	.0003 605 ⁺	.0001 810	.0000 901	.0000 445 ⁺	.0000 218	.0000 106
.43	.0004 975 ⁺	.0002 557	.0001 303	.0000 659	.0000 331	.0000 165 ⁻
.44	.0006 802	.0003 575 ⁺	.0001 863	.0000 964	.0000 495 ⁻	.0000 252
.45	.0009 214	.0004 951	.0002 638	.0001 395 ⁻	.0000 732	.0000 382
.46	.0012 372	.0006 793	.0003 699	.0001 998	.0001 072	.0000 572
.47	.0016 472	.0009 237	.0005 137	.0002 835 ⁻	.0001 553	.0000 846
.48	.0021 753	.0012 452	.0007 069	.0003 983	.0002 228	.0001 230
.49	.0028 500 ⁺	.0016 647	.0009 643	.0005 544	.0003 165 ⁺	.0001 796
.50	.0037 055 ⁻	.0022 074	.0013 042	.0007 648	.0004 454	.0002 578
.51	.0047 820	.0029 043	.0017 495 ⁻	.0010 460	.0006 211	.0003 665 ⁺
.52	.0061 269	.0037 920	.0023 279	.0014 185 ⁺	.0008 585 ⁺	.0005 164
.53	.0077 952	.0049 145 ⁺	.0030 735 ⁻	.0019 080	.0011 765 ⁻	.0007 210
.54	.0098 500 ⁺	.0063 235 ⁺	.0040 272	.0025 460	.0015 988	.0009 979
.55	.0123 638	.0080 794	.0052 378	.0033 711	.0021 552	.0013 695 ⁻
.56	.0154 184	.0102 521	.0067 633	.0044 298	.0028 822	.0018 630
.57	.0191 055 ⁺	.0129 220	.0086 717	.0057 780	.0038 247	.0025 165 ⁺
.58	.0235 272	.0161 804	.0110 419	.0074 821	.0050 370	.0033 708
.59	.0287 956	.0201 302	.0139 650 ⁻	.0096 202	.0065 846	.0044 801
.60	.0350 327	.0248 861	.0175 447	.0122 833	.0085 450 ⁺	.0059 095 ⁺
.61	.0423 696	.0305 746	.0218 983	.0155 766	.0110 101	.0077 370
.62	.0509 459	.0373 339	.0271 568	.0196 201	.0140 866	.0100 555 ⁻
.63	.0609 077	.0453 126	.0334 649	.0245 495 ⁺	.0178 982	.0129 745 ⁺
.64	.0724 057	.0546 691	.0409 805 ⁺	.0305 164	.0225 857	.0166 218
.65	.0855 930	.0655 690	.0498 737	.0376 880	.0283 083	.0211 445 ⁻
.66	.1006 216	.0781 833	.0603 250 ⁺	.0462 468	.0352 435 ⁺	.0267 105 ⁻
.67	.1176 385 ⁻	.0926 844	.0725 230	.0563 882	.0435 866	.0335 085 ⁺
.68	.1367 818	.1092 427	.0866 607	.0683 191	.0535 492	.0417 481
.69	.1581 755 ⁺	.1280 215 ⁺	.1029 316	.0822 534	.0653 571	.0516 584
.70	.1819 239	.1491 713	.1215 242	.0984 082	.0792 462	.0634 855 ⁺
.71	.2081 056	.1728 234	.1426 155 ⁺	.1169 976	.0954 583	.0774 892
.72	.2367 675 ⁺	.1990 830	.1663 640	.1382 256	.1142 340	.0939 371
.73	.2679 181	.2280 216	.1929 010	.1622 777	.1358 048	.1130 976
.74	.3015 209	.2596 686	.2223 216	.1893 109	.1603 832	.1352 306
.75	.3374 887	.2940 035 ⁻	.2546 749	.2194 430	.1881 516	.1605 760
.76	.3756 779	.3309 478	.2899 540	.2527 407	.2192 488	.1893 405 ⁻
.77	.4158 838	.3703 579	.3280 858	.2892 071	.2537 560	.2216 815 ⁺
.78	.4578 377	.4120 185 ⁻	.3689 215 ⁻	.3287 694	.2916 817	.2576 907
.79	.5012 052	.4556 380	.4122 286	.3712 670	.3329 463	.2973 751
.80	.5455 874	.5008 463	.4576 844	.4164 407	.3773 677	.3406 392

TABLE I. THE $I_0(p, q)$ FUNCTION

121

 $x = .81$ to 1.00 $q = 4.5$ $p = 16$ to 21

	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$I(p, q) = .281350901 \times 10^{-1}$		$.219590934 \times 10^{-1}$	$.173564003 \times 10^{-1}$	$.13890304 \times 10^{-1}$	$.112305391 \times 10^{-1}$	$.91677872 \times 10^{-2}$
$\cdot 81$	.5605 244	.4471 949	.3648 722	.3039 250 [*]	.2416 481	.1872 662
$\cdot 82$	.6355 015	.5241 606	.4342 818	.3632 432	.2943 637	.2369 033
$\cdot 83$	.6799 598	.5681 536	.4721 131	.3918 071	.3250 908	.2690 492
$\cdot 84$	.7213 109	.6075 299	.5112 869	.4219 231	.3587 506	.3030 484
$\cdot 85$	.7649 493	.6476 089	.5504 600	.4598 047	.3919 279	.3380 935
$\cdot 86$	.8042 846	.6856 957	.5890 481	.4955 038	.4245 781	.3693 272
$\cdot 87$	.8410 516	.7201 090	.6202 962	.5333 907	.4597 122	.4074 179
$\cdot 88$	.8718 512	.7532 136	.6513 120	.5682 929	.4913 035 [*]	.4394 086
$\cdot 89$	.9011 714	.7864 551	.6825 147	.6004 420	.5203 423	.4683 222
$\cdot 90$	.9284 148	.8133 978	.7074 795	.6300 836	.5498 976	.4927 810
$\cdot 91$	.9544 294	.8392 604	.7322 500	.6576 171	.5751 888	.5118 029
$\cdot 92$	.9792 266	.8639 489	.7549 227	.6816 648	.5976 604	.5340 277
$\cdot 93$	.9980 911	.8845 756	.7756 200	.7011 153	.6150 529	.5513 281
$\cdot 94$	.9989 971	.8934 768	.7825 006	.7091 716	.6254 504	.5613 501
$\cdot 95$	.9994 606	.8996 942	.7871 289	.7169 527	.6323 544	.5681 239
$\cdot 96$	.9997 546	.9000 427	.7902 575 [*]	.7234 718	.6345 786	.5715 711
$\cdot 97$	.9999 349	.9000 413	.7928 196	.7285 601	.6382 621	.5750 224
$\cdot 98$	.9999 603	.9000 239	.7937 809	.7307 306	.6396 721	.5766 050
$\cdot 99$	.9999 930	.9000 911	.7939 889	.7309 862	.6399 831	.5769 794
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $x = .34$ to $.90$ $q = 4.5$

	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$B(p, q) = .7549\ 9424 \times 10^5$	$.6267\ 8767 \times 10^5$	$.5242\ 2241 \times 10^5$	$.4414\ 5945 \times 10^5$	$.3741\ 1055 \times 10^5$	
x					
.34	.0000 001				
.35	.0000 001	.0000 001			
.36	.0000 002	.0000 001			
.37	.0000 004	.0000 002	.0000 001		
.38	.0000 007	.0000 003	.0000 001	.0000 001	
.39	.0000 012	.0000 005 ⁺	.0000 002	.0000 001	
.40	.0000 020	.0000 009	.0000 004	.0000 002	.0000 001
.41	.0000 032	.0000 015 ⁺	.0000 007	.0000 004	.0000 002
.42	.0000 052	.0000 025 ⁺	.0000 012	.0000 007	.0000 004
.43	.0000 082	.0000 040	.0000 020	.0000 010	.0000 005
.44	.0000 128	.0000 065 ⁺	.0000 032	.0000 017	.0000 008
.45	.0000 198	.0000 102	.0000 052	.0000 027	.0000 013
.46	.0000 303	.0000 160	.0000 084	.0000 044	.0000 024
.47	.0000 458	.0000 246	.0000 132	.0000 070	.0000 042
.48	.0000 685 ⁺	.0000 376	.0000 206	.0000 112	.0000 061
.49	.0001 013	.0000 568	.0000 317	.0000 176	.0000 094
.50	.0001 483	.0000 849	.0000 484	.0000 274	.0000 155
.51	.0002 150 ⁺	.0001 255 ⁺	.0000 729	.0000 421	.0000 242
.52	.0003 088	.0001 837	.0001 087	.0000 641	.0000 376
.53	.0004 393	.0002 162	.0001 606	.0000 964	.0000 576
.54	.0006 193	.0003 823	.0002 348	.0001 416	.0000 875
.55	.0008 653	.0005 439	.0003 402	.0002 118	.0001 314
.56	.0011 987	.0007 668	.0004 882	.0003 094	.0001 953
.57	.0016 466	.0010 718	.0006 934	.0004 478	.0002 876
.58	.0022 432	.0014 852	.0009 787	.0006 420	.0004 195
.59	.0030 316	.0020 410	.0013 676	.0009 123	.0006 062
.60	.0040 647	.0027 817	.0018 947	.0012 849	.0008 678
.61	.0054 077	.0037 607	.0026 012	.0017 944	.0012 415 ⁺
.62	.0071 396	.0050 444	.0035 473	.0024 819	.0017 323
.63	.0093 556	.0067 130	.0047 948	.0034 101	.0024 150
.64	.0121 087	.0088 654	.0064 295 ⁺	.0046 442	.0033 492
.65	.0157 110	.0116 190	.0085 538	.0062 708	.0045 791
.66	.0201 400	.0151 137	.0112 914	.0084 609	.0062 260
.67	.0256 308	.0195 141	.0147 904	.0111 648	.0084 956
.68	.0323 859	.0250 068	.0192 254	.0147 208	.0112 287
.69	.0406 309	.0318 115 ⁺	.0248 000	.0192 576	.0148 061
.70	.0506 143	.0401 210	.0317 484	.0249 926	.0196 015
.71	.0626 047	.0503 555 ⁺	.0403 451	.0317 811	.0255 849
.72	.0768 876	.0626 591	.0508 556	.0411 178	.0341 249
.73	.0937 596	.0773 596	.0643 811	.0521 011	.0454 811

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .91$ to 1.00 $q = 4.5$

	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$I(p, q) = 7549.9424 \times 10^5$	02678767×10^5	52422241×10^5	44145045×10^5	35	
.91	.8777 916	.8679 105	.8473 079	.8410 390	.8
.92	.9144 814	.9044 417	.8915 337	.8790 861	.8
.93	.9442 402	.9344 921	.9281 897	.9193 425 ^b	.9
.94	.9668 626	.9619 633	.9566 573	.9509 422	.9
.95	.9826 517	.9799 296	.9769 499	.9737 065 ^b	.9
.96	.9924 426	.9911 870	.9897 981	.9882 704	.9
.97	.9975 481	.9971 059	.9966 229	.9960 861	.9
.98	.9995 281	.9994 497	.9993 421	.9992 313	.9
.99	.9999 752	.9999 704	.9999 649	.9999 586	.9
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.00

a

b

TABLES OF THE INCOMPLETE β -FUNCTION $x = \cdot 42$ to $1\cdot 00$ $q = 4\cdot 5$

	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$B(p, q) = \cdot 2733\ 5478 \times \frac{x}{10^8}$	$\cdot 2355\ 0566 \times \frac{x}{10^8}$	$\cdot 2038\ 7057 \times \frac{x}{10^8}$	$\cdot 1772\ 7876 \times \frac{x}{10^8}$	$\cdot 1548\ 0$	
x					
$\cdot 42$	$\cdot 0000\ 001$				
$\cdot 43$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 44$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 45$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 46$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 47$	$\cdot 0000\ 010$	$\cdot 0000\ 005^+$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 0$
$\cdot 48$	$\cdot 0000\ 018$	$\cdot 0000\ 009$	$\cdot 0000\ 005^+$	$\cdot 0000\ 003$	$\cdot 0000\ 0$
$\cdot 49$	$\cdot 0000\ 029$	$\cdot 0000\ 016$	$\cdot 0000\ 009$	$\cdot 0000\ 005^-$	$\cdot 0000\ 0$
$\cdot 50$	$\cdot 0000\ 049$	$\cdot 0000\ 027$	$\cdot 0000\ 015^+$	$\cdot 0000\ 008$	$\cdot 0000\ 0$
$\cdot 51$	$\cdot 0000\ 079$	$\cdot 0000\ 045^+$	$\cdot 0000\ 026$	$\cdot 0000\ 014$	$\cdot 0000\ 0$
$\cdot 52$	$\cdot 0000\ 128$	$\cdot 0000\ 074$	$\cdot 0000\ 043$	$\cdot 0000\ 025^-$	$\cdot 0000\ 0$
$\cdot 53$	$\cdot 0000\ 204$	$\cdot 0000\ 120$	$\cdot 0000\ 071$	$\cdot 0000\ 042$	$\cdot 0000\ 0$
$\cdot 54$	$\cdot 0000\ 321$	$\cdot 0000\ 193$	$\cdot 0000\ 116$	$\cdot 0000\ 069$	$\cdot 0000\ 0$
$\cdot 55$	$\cdot 0000\ 499$	$\cdot 0000\ 306$	$\cdot 0000\ 187$	$\cdot 0000\ 114$	$\cdot 0000\ 0$
$\cdot 56$	$\cdot 0000\ 769$	$\cdot 0000\ 480$	$\cdot 0000\ 299$	$\cdot 0000\ 185^+$	$\cdot 0000\ 0$
$\cdot 57$	$\cdot 0001\ 173$	$\cdot 0000\ 745^-$	$\cdot 0000\ 472$	$\cdot 0000\ 298$	$\cdot 0000\ 0$
$\cdot 58$	$\cdot 0001\ 770$	$\cdot 0001\ 144$	$\cdot 0000\ 737$	$\cdot 0000\ 473$	$\cdot 0000\ 0$
$\cdot 59$	$\cdot 0002\ 645^+$	$\cdot 0001\ 738$	$\cdot 0001\ 139$	$\cdot 0000\ 744$	$\cdot 0000\ 0$
$\cdot 60$	$\cdot 0003\ 914$	$\cdot 0002\ 615^+$	$\cdot 0001\ 742$	$\cdot 0001\ 157$	$\cdot 0000\ 0$
$\cdot 61$	$\cdot 0005\ 738$	$\cdot 0003\ 897$	$\cdot 0002\ 638$	$\cdot 0001\ 780$	$\cdot 0001\ 0$
$\cdot 62$	$\cdot 0008\ 332$	$\cdot 0005\ 749$	$\cdot 0003\ 955^-$	$\cdot 0002\ 712$	$\cdot 0001\ 0$
$\cdot 63$	$\cdot 0011\ 989$	$\cdot 0008\ 403$	$\cdot 0005\ 872$	$\cdot 0004\ 091$	$\cdot 0002\ 0$
$\cdot 64$	$\cdot 0017\ 093$	$\cdot 0012\ 167$	$\cdot 0008\ 634$	$\cdot 0006\ 109$	$\cdot 0004\ 0$
$\cdot 65$	$\cdot 0024\ 154$	$\cdot 0017\ 456$	$\cdot 0012\ 576$	$\cdot 0009\ 034$	$\cdot 0006\ 0$
$\cdot 66$	$\cdot 0033\ 831$	$\cdot 0024\ 816$	$\cdot 0018\ 147$	$\cdot 0013\ 232$	$\cdot 0009\ 0$
$\cdot 67$	$\cdot 0046\ 971$	$\cdot 0034\ 962$	$\cdot 0025\ 944$	$\cdot 0019\ 198$	$\cdot 0014\ 0$
$\cdot 68$	$\cdot 0064\ 650^-$	$\cdot 0048\ 818$	$\cdot 0036\ 752$	$\cdot 0027\ 591$	$\cdot 0020\ 0$
$\cdot 69$	$\cdot 0088\ 216$	$\cdot 0067\ 561$	$\cdot 0051\ 589$	$\cdot 0039\ 283$	$\cdot 0029\ 0$
$\cdot 70$	$\cdot 0119\ 340$	$\cdot 0092\ 677$	$\cdot 0071\ 760$	$\cdot 0055\ 411$	$\cdot 0042\ 0$
$\cdot 71$	$\cdot 0160\ 064$	$\cdot 0126\ 012$	$\cdot 0098\ 917$	$\cdot 0077\ 436$	$\cdot 0060\ 0$
$\cdot 72$	$\cdot 0212\ 847$	$\cdot 0169\ 830$	$\cdot 0135\ 120$	$\cdot 0107\ 213$	$\cdot 0084\ 0$
$\cdot 73$	$\cdot 0280\ 607$	$\cdot 0226\ 867$	$\cdot 0182\ 903$	$\cdot 0147\ 065^-$	$\cdot 0117\ 0$
$\cdot 74$	$\cdot 0366\ 748$	$\cdot 0300\ 376$	$\cdot 0245\ 334$	$\cdot 0199\ 850^-$	$\cdot 0162\ 0$
$\cdot 75$	$\cdot 0475\ 169$	$\cdot 0394\ 155^+$	$\cdot 0326\ 062$	$\cdot 0269\ 033$	$\cdot 0221\ 0$
$\cdot 76$	$\cdot 0610\ 241$	$\cdot 0512\ 552$	$\cdot 0429\ 348$	$\cdot 0358\ 735^+$	$\cdot 0299\ 0$
$\cdot 77$	$\cdot 0776\ 745^+$	$\cdot 0660\ 431$	$\cdot 0560\ 061$	$\cdot 0473\ 759$	$\cdot 0399\ 0$
$\cdot 78$	$\cdot 0979\ 758$	$\cdot 0843\ 090$	$\cdot 0723\ 624$	$\cdot 0619\ 568$	$\cdot 0529\ 0$
$\cdot 79$	$\cdot 1224\ 476$	$\cdot 1066\ 111$	$\cdot 0925\ 902$	$\cdot 0802\ 215^+$	$\cdot 0693\ 0$
$\cdot 80$	$\cdot 1515\ 958$	$\cdot 1335\ 128$	$\cdot 1173\ 005^+$	$\cdot 1028\ 175^+$	$\cdot 0899\ 0$
$\cdot 81$	$\cdot 1858\ 790$	$\cdot 1655\ 513$	$\cdot 1470\ 987$	$\cdot 1304\ 084$	$\cdot 1153\ 0$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .49 \text{ to } 1.00$

4 4.5

[illegible]

TABLES OF THE INCOMPLETE β -FUNCTION

54 to 100

$q = 4.5$

$p =$

	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$p, q) = .5937\ 3149 \times \frac{1}{10^8}$		$.5336\ 9123 \times \frac{1}{10^8}$	$.4809\ 0858 \times \frac{1}{10^8}$	$.4343\ 6904 \times \frac{1}{10^8}$	$.3932\ 1829 \times \frac{1}{10^8}$	$.3567\ 34$
$\cdot 54$	.0000 001					
$\cdot 55$	.0000 001	.0000 001				
$\cdot 56$	.0000 002	.0000 001	.0000 001			
$\cdot 57$	.0000 004	.0000 003	.0000 002	.0000 001	.0000 001	
$\cdot 58$	.0000 008	.0000 005	.0000 003	.0000 002	.0000 001	.0000 00
$\cdot 59$	.0000 014	.0000 009	.0000 006	.0000 004	.0000 002	.0000 00
$\cdot 60$	.0000 026	.0000 017	.0000 011	.0000 007	.0000 005	.0000 00
$\cdot 61$	.0000 046	.0000 031	.0000 020	.0000 013	.0000 009	.0000 00
$\cdot 62$	.0000 082	.0000 055	.0000 037	.0000 024	.0000 016	.0000 01
$\cdot 63$	.0000 142	.0000 097	.0000 066	.0000 045	.0000 030	.0000 02
$\cdot 64$	.0000 243	.0000 168	.0000 116	.0000 080	.0000 055	.0000 03
$\cdot 65$	.0000 413	.0000 290	.0000 204	.0000 143	.0000 100	.0000 07
$\cdot 66$	.0000 693	.0000 494	.0000 352	.0000 250	.0000 178	.0000 12
$\cdot 67$	.0001 148	.0000 831	.0000 601	.0000 433	.0000 312	.0000 22
$\cdot 68$	.0001 880	.0001 381	.0001 013	.0000 742	.0000 542	.0000 39
$\cdot 69$	.0003 044	.0002 269	.0001 688	.0001 254	.0000 930	.0000 68
$\cdot 70$	.0004 873	.0003 684	.0002 780	.0002 095	.0001 576	.0001 18
$\cdot 71$	.0007 713	.0005 913	.0004 525	.0003 457	.0002 638	.0002 01
$\cdot 72$	.0012 072	.0009 381	.0007 278	.0005 638	.0004 361	.0003 36
$\cdot 73$	.0018 680	.0014 713	.0011 571	.0009 085	.0007 123	.0005 57
$\cdot 74$	.0028 580	.0022 812	.0018 180	.0014 466	.0011 494	.0009 12
$\cdot 75$	.0043 231	.0034 960	.0028 228	.0022 758	.0018 321	.0014 72
$\cdot 76$	.0064 645	.0052 955	.0043 311	.0035 371	.0028 846	.0023 49
$\cdot 77$	.0095 553	.0079 269	.0065 660	.0054 308	.0044 856	.0036 99
$\cdot 78$	.0139 584	.0117 246	.0098 335	.0082 356	.0068 877	.0057 52
$\cdot 79$	.0201 474	.0171 315	.0145 455	.0123 324	.0104 417	.0088 29
$\cdot 80$	.0287 267	.0247 219	.0212 445	.0182 308	.0156 236	.0133 72
$\cdot 81$	.0404 480	.0352 224	.0306 282	.0265 969	.0230 657	.0199 77
$\cdot 82$	.0562 198	.0495 266	.0435 697	.0382 780	.0335 856	.0294 33
$\cdot 83$	.0771 022	.0686 980	.0611 271	.0543 196	.0482 095	.0427 31
$\cdot 84$	.1042 801	.0939 511	.0845 340	.0759 644	.0681 801	.0611 21
$\cdot 85$	.1390 037	.1266 010	.1151 587	.1046 222	.0949 373	.0860 50
$\cdot 86$	.1824 859	.1679 694	.1544 194	.1417 953	.1300 549	.1191 51
$\cdot 87$	.2357 492	.2192 347	.2036 406	.1889 431	.1751 156	.1621 21
$\cdot 88$	.2994 152	.2812 193	.2638 400	.2472 718	.2315 050	.2165 20
$\cdot 89$	.3734 449	.3541 156	.3354 439	.3174 413	.3001 148	.2834 60
$\cdot 90$	.4568 509	.4371 698	.4179 447	.3992 002	.3809 570	.3632 30
$\cdot 91$	.5474 282	.5283 693	.5095 452	.4909 878	.4727 260	.4547 80
$\cdot 92$	.6415 828	.6242 141	.6068 708	.5895 853	.5723 882	.5553 08
$\cdot 93$	.7343 684	.7196 242	.7048 785	.6899 535	.6749 435	.6598 73
$\cdot 94$	.8198 648	.8086 150	.7971 375	.7854 495	.7735 686	.7615 11
$\cdot 95$	.8920 181	.8844 557	.8766 581	.8686 331	.8603 889	.8519 33
$\cdot 96$	.9459 760	.9417 642	.9373 757	.9328 117	.9280 736	.9231 63
$\cdot 97$	.9797 353	.9779 884	.9761 493	.9742 166	.9721 894	.9700 66
$\cdot 98$	.9955 171	.9950 925	.9946 408	.9941 613	.9936 531	.9931 11
$\cdot 99$	.9997 278	.9996 997	.9996 694	.9996 370	.9996 022	.9995 60
100	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLE I. THE $I_{\pi}(p, q)$ FUNCTION $x = .59$ to 1.00 $q = 4.5$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$H(p, q) = 3243.0374 \times 10^{-6}$		2954.0539×10^{-6}	2605.9327×10^{-6}	22464
$\cdot 59$	$\cdot 00000001$	$\cdot 00000001$		
$\cdot 60$	$\cdot 00000002$	$\cdot 00000001$	$\cdot 00000001$	
$\cdot 61$	$\cdot 00000004$	$\cdot 00000002$	$\cdot 00000002$	$\cdot 000000$
$\cdot 62$	$\cdot 00000007$	$\cdot 00000005$	$\cdot 00000003$	$\cdot 000000$
$\cdot 63$	$\cdot 00000014$	$\cdot 00000010$	$\cdot 00000006$	$\cdot 000000$
$\cdot 64$	$\cdot 00000026$	$\cdot 00000018$	$\cdot 00000012$	$\cdot 000000$
$\cdot 65$	$\cdot 00000049$	$\cdot 00000034$	$\cdot 00000024$	$\cdot 000000$
$\cdot 66$	$\cdot 00000089$	$\cdot 00000073$	$\cdot 00000044$	$\cdot 000000$
$\cdot 67$	$\cdot 00000161$	$\cdot 00000146$	$\cdot 00000083$	$\cdot 000000$
$\cdot 68$	$\cdot 00000289$	$\cdot 00000240$	$\cdot 00000153$	$\cdot 000000$
$\cdot 69$	$\cdot 00000519$	$\cdot 00000437$	$\cdot 00000278$	$\cdot 000000$
$\cdot 70$	$\cdot 00000898$	$\cdot 00000766$	$\cdot 00000498$	$\cdot 000000$
$\cdot 71$	$\cdot 00001329$	$\cdot 00001162$	$\cdot 00000882$	$\cdot 000000$
$\cdot 72$	$\cdot 00002098$	$\cdot 00001802$	$\cdot 00001540$	$\cdot 000001$
$\cdot 73$	$\cdot 00003461$	$\cdot 00003095$	$\cdot 00002656$	$\cdot 000002$
$\cdot 74$	$\cdot 00005727$	$\cdot 00005219$	$\cdot 00004540$	$\cdot 000003$
$\cdot 75$	$\cdot 00011826$	$\cdot 00009482$	$\cdot 00007594$	$\cdot 000006$
$\cdot 76$	$\cdot 00019197$	$\cdot 00015420$	$\cdot 00012592$	$\cdot 000010$
$\cdot 77$	$\cdot 00031327$	$\cdot 00025073$	$\cdot 00020604$	$\cdot 000016$
$\cdot 78$	$\cdot 00047987$	$\cdot 00039928$	$\cdot 00034126$	$\cdot 000027$
$\cdot 79$	$\cdot 00074564$	$\cdot 00062861$	$\cdot 00052684$	$\cdot 000044$
$\cdot 80$	$\cdot 00114395$	$\cdot 00095921$	$\cdot 00084225$	$\cdot 000070$
$\cdot 81$	$\cdot 01723223$	$\cdot 01393427$	$\cdot 0128878$	$\cdot 01111$
$\cdot 82$	$\cdot 02576607$	$\cdot 02257244$	$\cdot 02196673$	$\cdot 02121$
$\cdot 83$	$\cdot 03428324$	$\cdot 03144629$	$\cdot 03095619$	$\cdot 03026$
$\cdot 84$	$\cdot 04277104$	$\cdot 04026547$	$\cdot 03947490$	$\cdot 03900$
$\cdot 85$	$\cdot 051239087$	$\cdot 04904619$	$\cdot 04806607$	$\cdot 04854$
$\cdot 86$	$\cdot 05968521$	$\cdot 05787024$	$\cdot 05666630$	$\cdot 05630$
$\cdot 87$	$\cdot 06811914$	$\cdot 06675099$	$\cdot 06528640$	$\cdot 06500$
$\cdot 88$	$\cdot 07654404$	$\cdot 07568607$	$\cdot 07436477$	$\cdot 07411$
$\cdot 89$	$\cdot 08496127$	$\cdot 08392661$	$\cdot 08262646$	$\cdot 08246$
$\cdot 90$	$\cdot 09337017$	$\cdot 09243877$	$\cdot 09142856$	$\cdot 09137$
$\cdot 91$	$\cdot 10177205$	$\cdot 10086065$	$\cdot 10011146$	$\cdot 10006$
$\cdot 92$	$\cdot 11016725$	$\cdot 10926666$	$\cdot 10859440$	$\cdot 10856$
$\cdot 93$	$\cdot 11855599$	$\cdot 11766626$	$\cdot 11704475$	$\cdot 11701$
$\cdot 94$	$\cdot 12692926$	$\cdot 12604424$	$\cdot 12544645$	$\cdot 12541$
$\cdot 95$	$\cdot 13528807$	$\cdot 13436698$	$\cdot 13384942$	$\cdot 13381$
$\cdot 96$	$\cdot 14363252$	$\cdot 14266640$	$\cdot 14214202$	$\cdot 14211$
$\cdot 97$	$\cdot 15196274$	$\cdot 15095654$	$\cdot 15041164$	$\cdot 15038$
$\cdot 98$	$\cdot 16027875$	$\cdot 15924675$	$\cdot 15884181$	$\cdot 15881$
$\cdot 99$	$\cdot 16858054$	$\cdot 16754642$	$\cdot 16714184$	$\cdot 16711$
1.00	$\cdot 17686811$	$\cdot 17576671$	$\cdot 17534184$	$\cdot 17531$

TABLES OF THE INCOMPLETE β -FUNCTION

2 to 60

$q = 5$

$p = 5$

	$p = 5$	$p = 5.5$	$p = 6$	$p = 6.5$	$p = 7$	$p = 7.5$
$q) = .1587\ 3016 \times \frac{1}{10^4}$	$.1108\ 4890 \times \frac{1}{10^4}$	$.7936\ 5079 \times \frac{1}{10^4}$	$.5806\ 3711 \times \frac{1}{10^4}$	$.4329\ 0043 \times \frac{1}{10^4}$	$.3281\ 8619$	
2	.0000 004	.0000 001				
3	.0000 028	.0000 006	.0000 001			
4	.0000 113	.0000 029	.0000 007	.0000 002		
5	.0000 332	.0000 096	.0000 028	.0000 008	.0000 001	
6	.0000 798	.0000 254	.0000 079	.0000 024	.0000 007	
7	.0001 666	.0000 572	.0000 193	.0000 064	.0000 021	
8	.0003 136	.0001 149	.0000 415	.0000 147	.0000 052	
9	.0005 453	.0002 119	.0000 810	.0000 305 ⁺	.0000 114	
0	.0008 909	.0003 646	.0001 469	.0000 584	.0000 229	
1	.0013 838	.0005 936	.0002 507	.0001 044	.0000 429	
2	.0020 615	.0009 230	.0004 069	.0001 769	.0000 760	
3	.0029 649	.0013 808	.0006 332	.0002 864	.0001 279	
4	.0041 384	.0019 986	.0009 505	.0004 459	.0002 066	
5	.0056 287	.0028 117	.0013 832	.0006 713	.0003 219	
6	.0074 847	.0038 587	.0019 593	.0009 815 ⁺	.0004 858	
7	.0097 568	.0051 808	.0027 098	.0013 985	.0007 131	
8	.0124 962	.0068 224	.0036 694	.0019 475	.0010 214	
9	.0157 541	.0088 297	.0048 757	.0026 570	.0014 309	
0	.0195 814	.0112 506	.0063 694	.0035 589	.0019 654	
1	.0240 280	.0141 343	.0081 935 ⁺	.0046 883	.0026 515	
2	.0291 417	.0175 304	.0103 936	.0060 831	.0035 193	
3	.0349 682	.0214 888	.0130 167	.0077 843	.0046 020	
4	.0415 503	.0260 588	.0161 116	.0098 356	.0059 361	
5	.0489 273	.0312 883	.0197 277	.0122 827	.0075 612	
6	.0571 345	.0372 238	.0239 148	.0151 734	.0095 196	
7	.0662 024	.0439 094	.0287 224	.0185 569	.0118 563	
8	.0761 583	.0513 861	.0341 994	.0224 834	.0146 187	
9	.0870 218	.0596 916	.0403 932	.0270 037	.0178 560	
0	.0988 087	.0688 598	.0473 490	.0321 685	.0216 192	
1	.1115 286	.0789 198	.0551 097	.0380 276	.0259 599	
2	.1251 852	.0898 962	.0637 149	.0446 299	.0309 308	
3	.1397 759	.1018 081	.0732 005	.0520 222	.0365 839	
4	.1552 923	.1146 689	.0835 979	.0602 487	.0429 711	
5	.1717 193	.1284 861	.0949 341	.0693 508	.0501 427	
6	.1890 360	.1432 612	.1072 304	.0793 658	.0581 470	
7	.2072 151	.1589 890	.1205 026	.0903 267	.0670 298	
8	.2262 236	.1756 580	.1347 603	.1022 617	.0768 336	
9	.2460 227	.1932 500 ⁺	.1500 068	.1151 933	.0875 966	
0	.2665 677	.2117 404	.1662 386	.1291 382	.0993 526	
1	.2878 090	.2310 979	.1834 452	.1441 064	.1121 300	
2	.3096 920	.2512 848	.2016 092	.1601 012	.1259 511	
3	.3321 576	.2722 571	.2207 058	.1771 186	.1408 320	
4	.3551 423	.2939 650 ⁺	.2407 033	.1951 471	.1567 813	
5	.3785 703	.3162 228	.2617 018			
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TABLES OF THE INCOMPLETE β -FUNCTION

0.60

$q = 5$

$p = 8$ to 10

$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$
$\cdot 2525\ 2525 \times \frac{1}{10^8}$	$\cdot 1969\ 1172 \times \frac{1}{10^8}$	$\cdot 1554\ 0016 \times \frac{1}{10^8}$	$\cdot 1239\ 8145 \times \frac{1}{10^8}$	$\cdot 9990\ 0100 \times \frac{1}{10^8}$	$\cdot 8122\ 9227 \times \frac{1}{10^8}$
$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 002$	$\cdot 0000\ 002$	$\cdot 0000\ 002$	$\cdot 0000\ 002$		
$\cdot 0000\ 006$	$\cdot 0000\ 006$	$\cdot 0000\ 005$			
$\cdot 0000\ 015^+$	$\cdot 0000\ 013$				
$\cdot 0000\ 034$					
$\cdot 0000\ 070$	$\cdot 0000\ 028$	$\cdot 0000\ 011$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 136$	$\cdot 0000\ 057$	$\cdot 0000\ 023$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 247$	$\cdot 0000\ 107$	$\cdot 0000\ 046$	$\cdot 0000\ 020$	$\cdot 0000\ 008$	$\cdot 0000\ 004$
$\cdot 0000\ 430$	$\cdot 0000\ 193$	$\cdot 0000\ 086$	$\cdot 0000\ 038$	$\cdot 0000\ 017$	$\cdot 0000\ 007$
$\cdot 0000\ 717$	$\cdot 0000\ 334$	$\cdot 0000\ 154$	$\cdot 0000\ 071$	$\cdot 0000\ 032$	$\cdot 0000\ 015$
$\cdot 0001\ 153$	$\cdot 0000\ 554$	$\cdot 0000\ 264$	$\cdot 0000\ 125^+$	$\cdot 0000\ 059$	$\cdot 0000\ 027$
$\cdot 0001\ 797$	$\cdot 0000\ 890$	$\cdot 0000\ 437$	$\cdot 0000\ 213$	$\cdot 0000\ 103$	$\cdot 0000\ 050$
$\cdot 0002\ 723$	$\cdot 0001\ 387$	$\cdot 0000\ 701$	$\cdot 0000\ 352$	$\cdot 0000\ 175^+$	$\cdot 0000\ 087$
$\cdot 0004\ 024$	$\cdot 0002\ 105^+$	$\cdot 0001\ 093$	$\cdot 0000\ 563$	$\cdot 0000\ 288$	$\cdot 0000\ 147$
$\cdot 0005\ 812$	$\cdot 0003\ 119$	$\cdot 0001\ 660$	$\cdot 0000\ 877$	$\cdot 0000\ 460$	$\cdot 0000\ 240$
$\cdot 0008\ 226$	$\cdot 0004\ 521$	$\cdot 0002\ 465^+$	$\cdot 0001\ 334$	$\cdot 0000\ 718$	$\cdot 0000\ 383$
$\cdot 0011\ 427$	$\cdot 0006\ 425^+$	$\cdot 0003\ 585$	$\cdot 0001\ 985^+$	$\cdot 0001\ 092$	$\cdot 0000\ 597$
$\cdot 0015\ 607$	$\cdot 0008\ 969$	$\cdot 0005\ 114$	$\cdot 0002\ 895^+$	$\cdot 0001\ 628$	$\cdot 0000\ 910$
$\cdot 0020\ 985^+$	$\cdot 0012\ 314$	$\cdot 0007\ 170$	$\cdot 0004\ 145^+$	$\cdot 0002\ 381$	$\cdot 0001\ 359$
$\cdot 0027\ 815^+$	$\cdot 0016\ 651$	$\cdot 0009\ 891$	$\cdot 0005\ 834$	$\cdot 0003\ 419$	$\cdot 0001\ 991$
$\cdot 0036\ 381$	$\cdot 0022\ 200$	$\cdot 0013\ 443$	$\cdot 0008\ 083$	$\cdot 0004\ 829$	$\cdot 0002\ 867$
$\cdot 0047\ 002$	$\cdot 0029\ 214$	$\cdot 0018\ 020$	$\cdot 0011\ 037$	$\cdot 0006\ 717$	$\cdot 0004\ 063$
$\cdot 0060\ 031$	$\cdot 0037\ 979$	$\cdot 0023\ 846$	$\cdot 0014\ 868$	$\cdot 0009\ 211$	$\cdot 0005\ 672$
$\cdot 0075\ 855^+$	$\cdot 0048\ 815^+$	$\cdot 0031\ 178$	$\cdot 0019\ 776$	$\cdot 0012\ 464$	$\cdot 0007\ 809$
$\cdot 0094\ 894$	$\cdot 0062\ 080$	$\cdot 0040\ 310$	$\cdot 0025\ 994$	$\cdot 0016\ 657$	$\cdot 0010\ 611$
$\cdot 0117\ 598$	$\cdot 0078\ 164$	$\cdot 0051\ 568$	$\cdot 0033\ 790$	$\cdot 0022\ 001$	$\cdot 0014\ 242$
$\cdot 0144\ 450^+$	$\cdot 0097\ 495$	$\cdot 0065\ 319$	$\cdot 0043\ 465^+$	$\cdot 0028\ 742$	$\cdot 0018\ 896$
$\cdot 0175\ 957$	$\cdot 0120\ 533$	$\cdot 0081\ 965$	$\cdot 0055\ 363$	$\cdot 0037\ 162$	$\cdot 0024\ 801$
$\cdot 0212\ 648$	$\cdot 0147\ 773$	$\cdot 0101\ 946$	$\cdot 0069\ 862$	$\cdot 0047\ 579$	$\cdot 0032\ 218$
$\cdot 0255\ 075$	$\cdot 0179\ 736$	$\cdot 0125\ 739$	$\cdot 0087\ 382$	$\cdot 0060\ 353$	$\cdot 0041\ 448$
$\cdot 0303\ 799$	$\cdot 0216\ 971$	$\cdot 0153\ 856$	$\cdot 0108\ 384$	$\cdot 0075\ 886$	$\cdot 0052\ 832$
$\cdot 0359\ 393$	$\cdot 0260\ 050^+$	$\cdot 0186\ 840$	$\cdot 0133\ 365$	$\cdot 0094\ 620$	$\cdot 0066\ 755^+$
$\cdot 0422\ 430$	$\cdot 0309\ 505$	$\cdot 0225\ 264$	$\cdot 0162\ 862$	$\cdot 0117\ 042$	$\cdot 0083\ 644$
$\cdot 0493\ 480$	$\cdot 0366\ 162$	$\cdot 0269\ 726$	$\cdot 0197\ 446$	$\cdot 0143\ 677$	$\cdot 0103\ 974$
$\cdot 0573\ 099$	$\cdot 0430\ 284$	$\cdot 0320\ 843$	$\cdot 0237\ 720$	$\cdot 0175\ 095^+$	$\cdot 0128\ 263$
$\cdot 0661\ 826$	$\cdot 0502\ 704$	$\cdot 0379\ 249$	$\cdot 0284\ 314$	$\cdot 0211\ 901$	$\cdot 0157\ 074$
$\cdot 0760\ 168$	$\cdot 0583\ 957$	$\cdot 0445\ 582$	$\cdot 0337\ 882$	$\cdot 0254\ 733$	$\cdot 0191\ 014$
$\cdot 0868\ 601$	$\cdot 0674\ 620$	$\cdot 0520\ 483$	$\cdot 0399\ 092$	$\cdot 0304\ 262$	$\cdot 0230\ 730$
$\cdot 0987\ 553$	$\cdot 0775\ 240$	$\cdot 0604\ 581$	$\cdot 0468\ 622$	$\cdot 0361\ 181$	$\cdot 0276\ 905^+$
$\cdot 1117\ 400$	$\cdot 0886\ 330$	$\cdot 0698\ 492$	$\cdot 0547\ 151$	$\cdot 0426\ 201$	$\cdot 0330\ 255$
$\cdot 1258\ 456$	$\cdot 1008\ 359$	$\cdot 0802\ 801$	$\cdot 0635\ 349$	$\cdot 0500\ 043$	$\cdot 0391\ 519$
$\cdot 1410\ 967$	$\cdot 1141\ 738$	$\cdot 0918\ 057$	$\cdot 0733\ 869$	$\cdot 0583\ 426$	$\cdot 0461\ 455^+$
$\cdot 1575\ 100$	$\cdot 1286\ 816$	$\cdot 1044\ 764$	$\cdot 0843\ 333$	$\cdot 0677\ 063$	$\cdot 0540\ 831$
$\cdot 1750\ 940$	$\cdot 1443\ 868$	$\cdot 1183\ 363$	$\cdot 0964\ 325^+$	$\cdot 0781\ 644$	$\cdot 0630\ 412$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61$ TO 1.00 $q = 5$

	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p =$
$I(p, q) = .2525 .2525 \frac{1}{100}$	$.1060 .1172 \frac{1}{100}$	$.1551 .0016 \frac{1}{100}$	$.1249 .8145 \frac{1}{100}$	$.0000$	
.61	.1060 7 745	.1422 9 942	.1811 5 531	.1340 8 826	.10557
.62	.1405 7 101	.1719 9 952	.1400 8 831	.1705 1 728	.13333
.63	.15218 866	.1814 9 965	.1497 9 964	.1498 7 722	.14621
.64	.1541 4 413	.1711 4 427	.1502 9 947	.1400 2 238	.14020
.65	.15434 4 503	.1714 5 508	.1505 9 927	.1408 4 464	.14227
.66	.1623 3 562	.1715 6 616	.1514 8 816	.1421 6 603	.14541
.67	.16410 3 448	.16015 5 515	.15624 7 704	.15248 3 327	.14862
.68	.16602 2 117	.16412 6 644	.15944 6 626	.15556 8 881	.15187
.69	.16698 2 005	.16605 4 442	.16240 5 520	.15855 4 411	.15514
.70	.17246 1 000	.16802 3 324	.16544 4 446	.16162 0 080	.15842
.71	.17406 1 005	.17101 2 205	.16844 3 341	.16504 0 006	.16168
.72	.17745 6 643	.17412 1 155	.17143 2 238	.16812 2 262	.16490
.73	.17984 0 648	.17602 2 201	.17444 2 241	.17114 0 006	.16807
.74	.18210 1 144	.17904 3 305	.17604 3 322	.17302 4 472	.17116
.75	.18424 5 564	.18187 5 504	.17949 6 610	.17504 6 644	.17416
.76	.18624 0 060	.18409 7 705	.18184 4 457	.17648 1 179	.17702
.77	.18808 2 224	.18617 4 478	.18444 5 519	.18200 4 494	.18026
.78	.18978 8 630	.18809 8 805	.18629 4 417	.18442 2 278	.18245
.79	.19144 0 608	.18986 4 458	.18825 3 365	.18657 4 427	.18477
.80	.19274 1 115	.19146 9 962	.19008 6 604	.18860 0 067	.18701
.81	.19402 5 588	.19291 2 294	.19172 5 569	.19044 5 574	.18907
.82	.19510 6 641	.19410 5 567	.19340 4 468	.19210 5 594	.19044
.83	.19612 1 144	.19517 1 144	.19449 9 944	.19310 0 056	.19192
.84	.19709 4 442	.19612 4 429	.19541 7 724	.19407 1 173	.19295
.85	.19800 5 504	.19707 3 327	.19635 4 454	.19508 4 444	.19392
.86	.19886 2 204	.19791 5 504	.19729 5 515	.19602 6 644	.19490
.87	.19969 9 909	.19875 6 604	.19820 6 607	.19692 2 264	.19590
.88	.20050 5 514	.19954 4 422	.19904 7 707	.19780 2 264	.19690
.89	.20134 5 514	.20039 5 508	.20004 4 442	.19874 1 146	.19794
.90	.20216 5 507	.20116 6 608	.20084 4 448	.19964 1 144	.19892
.91	.20297 5 500	.20196 6 608	.20165 4 448	.20052 1 109	.19990
.92	.20377 5 504	.20276 6 610	.20245 4 447	.20140 5 594	.20084
.93	.20456 5 504	.20355 6 614	.20325 5 504	.20228 5 595	.20180
.94	.20534 5 504	.20434 6 614	.20404 4 445	.20316 5 595	.20280
.95	.20612 5 504	.20512 6 614	.20484 4 445	.20404 5 595	.20380
.96	.20690 5 504	.20590 6 614	.20562 4 445	.20492 5 595	.20480
.97	.20768 5 504	.20668 6 614	.20640 4 445	.20580 5 595	.20580
.98	.20846 5 504	.20746 6 614	.20718 4 445	.20668 5 595	.20680
.99	.20924 5 504	.20824 6 614	.20796 4 445	.20756 5 595	.20780
1.00	.21002 5 504	.20902 6 614	.20874 4 445	.20844 5 595	.20880

TABLES OF THE INCOMPLETE β -FUNCTION

2 to 70

$q = 5$

$p = 11$

	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$
$q) = .6660\ 0067 \times \frac{1}{10^4}$	$.4578\ 7546 \times \frac{1}{10^4}$	$.3232\ 0621 \times \frac{1}{10^4}$	$.2334\ 2670 \times \frac{1}{10^4}$	$.1719\ 9862 \times \frac{1}{10^4}$	$.1289\ 9897$	
2	.0000 001					
3	.0000 001					
4	.0000 003	.0000 001				
5	.0000 007	.0000 001				
6	.0000 013	.0000 003	.0000 001			
7	.0000 024	.0000 005 ⁺	.0000 001			
8	.0000 043	.0000 010	.0000 002	.0000 001		
9	.0000 074	.0000 019	.0000 005 ⁻	.0000 001		
0	.0000 125 ⁻	.0000 033	.0000 009	.0000 002	.0000 001	
1	.0000 204	.0000 057	.0000 015 ⁺	.0000 004	.0000 001	
2	.0000 325 ⁻	.0000 095 ⁻	.0000 027	.0000 008	.0000 002	.0000 001
3	.0000 506	.0000 154	.0000 046	.0000 014	.0000 004	.0000 001
4	.0000 771	.0000 245 ⁻	.0000 076	.0000 023	.0000 007	.0000 002
5	.0001 153	.0000 381	.0000 124	.0000 039	.0000 012	.0000 004
6	.0001 693	.0000 582	.0000 196	.0000 065 ⁺	.0000 021	.0000 007
7	.0002 444	.0000 871	.0000 305 ⁺	.0000 105 ⁺	.0000 036	.0000 012
8	.0003 474	.0001 284	.0000 466	.0000 166	.0000 059	.0000 020
9	.0004 866	.0001 861	.0000 699	.0000 259	.0000 094	.0000 034
0	.0006 722	.0002 658	.0001 033	.0000 395 ⁻	.0000 149	.0000 056
1	.0009 169	.0003 745 ⁻	.0001 502	.0000 594	.0000 231	.0000 089
2	.0012 356	.0005 206	.0002 155 ⁺	.0000 878	.0000 353	.0000 140
3	.0016 463	.0007 148	.0003 050 ⁺	.0001 281	.0000 531	.0000 217
4	.0021 700	.0009 702	.0004 263	.0001 844	.0000 787	.0000 332
5	.0028 314	.0013 023	.0005 887	.0002 621	.0001 151	.0000 499
6	.0036 589	.0017 298	.0008 038	.0003 679	.0001 661	.0000 741
7	.0046 850 ⁺	.0022 748	.0010 858	.0005 105 ⁻	.0002 368	.0001 085
8	.0059 467	.0029 633	.0014 517	.0007 006	.0003 336	.0001 570
9	.0074 855 ⁺	.0038 254	.0019 222	.0009 515 ⁺	.0004 648	.0002 244
0	.0093 477	.0048 957	.0025 214	.0012 794	.0006 407	.0003 170
1	.0115 843	.0062 138	.0032 779	.0017 038	.0008 741	.0004 432
2	.0142 514	.0078 243	.0042 252	.0022 484	.0011 809	.0006 130
3	.0174 098	.0097 774	.0054 015 ⁻	.0029 409	.0015 805 ⁺	.0008 396
4	.0211 247	.0121 287	.0068 510	.0038 143	.0020 964	.0011 389
5	.0254 659	.0149 394	.0086 235 ⁻	.0049 068	.0027 564	.0015 307
6	.0305 067	.0182 764	.0107 751	.0062 628	.0035 941	.0020 391
7	.0363 239	.0222 119	.0133 684	.0079 330	.0046 485 ⁺	.0026 931
8	.0429 969	.0268 234	.0164 724	.0099 751	.0059 654	.0035 275
9	.0506 066	.0321 929	.0201 626	.0124 540	.0075 976	.0045 833
0	.0592 346	.0384 064	.0245 209	.0154 419	.0096 054	.0059 090
1	.0689 623	.0455 532	.0296 350 ⁻	.0190 187	.0120 575 ⁺	.0075 606
2	.0798 689	.0537 247	.0355 980	.0232 719	.0150 310	.0096 030
3	.0920 308	.0630 135 ⁻	.0425 080	.0282 960	.0186 116	.0121 102
4	.1055 192	.0735 116	.0504 661	.0341 925 ⁻	.0228 939	.0151 657
5	.1203 993	.0853 092	.0595 764	.0410 686	.0279 810	.0188 633
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8						

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to 1.00 $q = .5$

	$p = .11$	$p = .12$	$p = .13$	$p = .14$	p
$I(p, q) = .66666667 \times 10^6$	$.47787546 \times 10^6$	$.32320021 \times 10^6$	$.23342070 \times 10^6$	$.17$	
.71	.34997251	.4852646	.3240067	.30721302	.31
.72	.3845548	.5212280	.3603453	.3431966	.33
.73	.4180004	.5575199	.3977412	.3796960	.35
.74	.4510557	.5940640	.4356562	.4162333	.37
.75	.4836486	.6309180	.4738804	.4536003	.39
.76	.5159040	.6680286	.5124161	.4908630	.40
.77	.5478490	.7053947	.5500086	.5280702	.42
.78	.5795022	.7431097	.5872221	.5648022	.43
.79	.6109040	.7811410	.6233400	.6010620	.44
.80	.6420766	.8194454	.6582232	.6363538	.45
.81	.6730400	.8579286	.6913406	.6713203	.46
.82	.7038100	.8956458	.7224525	.7058400	.47
.83	.7344000	.9326441	.7512012	.7394100	.48
.84	.7648200	.9689186	.7776286	.7717480	.49
.85	.7951000	.1004487	.8014000	.8034380	.50
.86	.8252400	.1018182	.8221610	.8341434	.51
.87	.8552800	.1030005	.8410142	.8637383	.52
.88	.8852300	.1040908	.8554126	.8914720	.53
.89	.9151000	.1050911	.8670115	.9180857	.54
.90	.9449000	.1060060	.8758458	.9421800	.55
.91	.9746200	.1068300	.8814714	.9644003	.56
.92	.1003300	.1075748	.8841001	.9848422	.57
.93	.1030200	.1082402	.8841008	.10044386	.58
.94	.1056900	.1088264	.8814715	.10205500	.59
.95	.1083400	.1093342	.8758454	.10368450	.60
.96	.1109800	.1097646	.8670112	.10534418	.61
.97	.1136100	.1101160	.8554126	.10703500	.62
.98	.1162300	.1103884	.8410115	.10876000	.63
.99	.1188500	.1105760	.8221614	.11052012	.64
1.00	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

TABLES OF THE INCOMPLETE β -FUNCTION

24 to .80

$q = 5$

$p = 1$

	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$\gamma, g) = .9828\ 4928 \times \frac{1}{10^8}$	$.7594\ 7444 \times \frac{1}{10^8}$	$.5943\ 7130 \times \frac{1}{10^8}$	$.4705\ 4395 \times \frac{1}{10^8}$	$.3764\ 3516 \times \frac{1}{10^8}$	$.3040\ 437$	
24	.0000 00I					
25	.0000 00I					
26	.0000 002	.0000 00I				
27	.0000 004	.0000 00I				
28	.0000 007	.0000 002	.0000 00I			
29	.0000 012	.0000 004	.0000 00I	.0000 00I		
30	.0000 020	.0000 007	.0000 003	.0000 00I		
31	.0000 034	.0000 013	.0000 005 ⁻	.0000 002	.0000 00I	
32	.0000 055 ⁺	.0000 02I	.0000 008	.0000 003	.0000 00I	
33	.0000 088	.0000 035 ⁺	.0000 014	.0000 006	.0000 002	.0000 00I
34	.0000 138	.0000 057	.0000 023	.0000 010	.0000 004	.0000 002
35	.0000 214	.0000 09I	.0000 038	.0000 016	.0000 007	.0000 003
36	.0000 327	.0000 143	.0000 062	.0000 027	.0000 01I	.0000 005
37	.0000 492	.0000 22I	.0000 098	.0000 043	.0000 019	.0000 008
38	.0000 73I	.0000 337	.0000 154	.0000 070	.0000 03I	.0000 014
39	.000I 07I	.0000 507	.0000 238	.0000 110	.0000 05I	.0000 023
40	.000I 552	.0000 753	.0000 362	.0000 172	.0000 082	.0000 038
41	.0002 223	.000I 104	.0000 544	.0000 266	.0000 129	.0000 062
42	.0003 149	.000I 602	.0000 808	.0000 404	.0000 20I	.0000 099
43	.0004 413	.0002 298	.000I 186	.0000 607	.0000 309	.0000 156
44	.0006 123	.0003 26I	.000I 722	.0000 902	.0000 469	.0000 242
45	.0008 413	.0004 580	.0002 472	.000I 324	.0000 704	.0000 372
46	.001I 450 ⁺	.0006 370	.0003 513	.000I 923	.000I 045 ⁻	.0000 564
47	.0015 444	.0008 774	.0004 943	.0002 763	.000I 533	.0000 845
48	.0020 647	.001I 974	.0006 886	.0003 929	.0002 226	.000I 253
49	.0027 37I	.0016 196	.0009 504	.0005 534	.0003 200	.000I 838
50	.0035 987	.002I 718	.0012 997	.0007 719	.0004 553	.0002 668
51	.0046 938	.0028 877	.0017 619	.0010 669	.0006 415 ⁺	.0003 833
52	.0060 748	.0038 085 ⁻	.0023 68I	.0014 614	.0008 956	.0005 454
53	.0078 030	.0049 830	.003I 563	.0019 843	.0012 389	.0007 686
54	.0099 492	.0064 694	.004I 728	.0026 715 ⁺	.0016 987	.0010 733
55	.0125 948	.0083 360	.0054 73I	.0035 670	.0023 090	.0014 853
56	.0158 324	.0106 620	.007I 232	.0047 242	.003I 12I	.0020 374
57	.0197 659	.0135 389	.0092 008	.0062 074	.004I 600	.0027 707
58	.0245 110	.0170 707	.0117 964	.0080 933	.0055 159	.0037 363
59	.0301 948	.0213 748	.0150 146	.0104 72I	.0072 560	.0049 97I
60	.0369 556	.0265 819	.0189 745 ⁻	.0134 49I	.0094 708	.0066 292
61	.0449 419	.0328 36I	.0238 105 ⁺	.017I 458	.0122 673	.0087 246
62	.0543 105 ⁻	.0402 940	.0296 725 ⁺	.0217 009	.0157 700	.0113 924
63	.0652 248	.049I 235 ⁻	.0367 254	.0272 703	.020I 222	.0147 61I
64	.0778 519	.0595 019	.045I 48I	.0340 277	.0254 873	.0189 802
65	.0923 592	.0716 134	.055I 319	.042I 636	.0320 484	.0242 21I
66	.1089 10I	.0856 449	.0668 777	.0518 837	.0400 084	.0306 779
67	.1276 580	.1017 824	.0805 02I	.0624 062	.0495 887 ⁺	.0385 567

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to 1.00 $q = 5$

	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$B(p, q) = .9828\ 4928 \times \frac{x}{108}$	$.7594\ 7444 \times \frac{x}{108}$	$.5943\ 7130 \times \frac{x}{108}$	$.4705\ 4395 \times \frac{x}{108}$	$.3764\ 351$	
x					
.81	.6317 331	.5905 160	.5497 111	.5097 008	.4708 108
.82	.6768 640	.6381 149	.5992 796	.5607 305 ⁺	.5227 982
.83	.7207 849	.6850 053	.6487 088	.6122 493	.5759 178
.84	.7628 742	.7304 842	.6972 304	.6634 165 ⁻	.6293 321
.85	.8025 286	.7738 444	.7440 448	.7133 825 ⁻	.6821 070
.86	.8391 894	.8144 050 ⁻	.7883 539	.7612 333	.7332 448
.87	.8723 707	.8515 446	.8293 995 ⁺	.8060 772	.7817 288
.88	.9016 879	.8847 376	.8665 067	.8470 860	.8265 777
.89	.9268 831	.9135 890	.8991 280	.8835 482	.8669 090
.90	.9478 476	.9378 663	.9268 869	.9149 251	.9020 064
.91	.9646 367	.9575 249	.9496 150 ⁻	.9409 016	.9313 865
.92	.9774 739	.9727 216	.9673 779	.9614 266	.9548 565
.93	.9867 434	.9838 141	.9804 844	.9767 359	.9725 526
.94	.9929 660	.9913 404	.9894 729	.9873 478	.9849 507
.95	.9967 597	.9959 777	.9950 697	.9940 255 ⁻	.9928 351
.96	.9987 835 ⁺	.9984 774	.9981 181	.9977 006	.9972 197
.97	.9996 695 ⁻	.9995 828	.9994 801	.9993 594	.9992 190
.98	.9999 502	.9999 366	.9999 203	.9999 010	.9998 783
.99	.9999 982	.9999 977	.9999 971	.9999 964	.9999 955
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

to go

$q = 5$

$p = 2$

$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$
$= .2477\ 3938 \times 10^6$	$.2035\ 0020 \times 10^6$	$.1684\ 1396 \times 10^6$	$.1403\ 4497 \times 10^6$	$.1177\ 0868 \times 10^6$	$.9941\ 6000$
.0000 001					
.0000 001					
.0000 002	.0000 001				
.0000 004	.0000 002	.0000 001			
.0000 006	.0000 003	.0000 001	.0000 001		
.0000 011	.0000 005	.0000 002	.0000 001		
.0000 018	.0000 008	.0000 004	.0000 002	.0000 001	
.0000 030	.0000 014	.0000 007	.0000 003	.0000 001	.0000 001
.0000 049	.0000 024	.0000 011	.0000 006	.0000 003	.0000 001
.0000 078	.0000 039	.0000 019	.0000 010	.0000 005	.0000 003
.0000 124	.0000 064	.0000 032	.0000 016	.0000 008	.0000 004
.0000 195 ⁺	.0000 102	.0000 053	.0000 027	.0000 014	.0000 007
.0000 303	.0000 161	.0000 086	.0000 045 ⁺	.0000 023	.0000 012
.0000 463	.0000 252	.0000 137	.0000 074	.0000 039	.0000 021
.0000 701	.0000 390	.0000 216	.0000 119	.0000 063 ⁺	.0000 039
.0001 049	.0000 596	.0000 337	.0000 189	.0000 106	.0000 069
.0001 554	.0000 900	.0000 519	.0000 292	.0000 170	.0000 107
.0002 276	.0001 344	.0000 790	.0000 462	.0000 269	.0000 176
.0003 301	.0001 987	.0001 190	.0000 710	.0000 421	.0000 279
.0004 741	.0002 908	.0001 775	.0001 078	.0000 652	.0000 432
.0006 742	.0004 212	.0002 618	.0001 620	.0000 928	.0000 642
.0009 499	.0006 042	.0003 824	.0002 409	.0001 511	.0000 943
.0013 261	.0008 585 ⁺	.0005 530	.0003 546	.0002 263	.0001 499
.0018 348	.0012 086	.0007 921	.0005 167	.0003 456	.0002 171
.0025 165 ⁺	.0016 859	.0011 239	.0007 458	.0004 928	.0003 241
.0034 220	.0023 311	.0015 891	.0010 662	.0007 164	.0004 969
.0046 142	.0031 950 ⁺	.0022 015 ⁺	.0015 191	.0010 414	.0007 016
.0061 706	.0043 417	.0030 401	.0024 191	.0014 709	.0010 169
.0081 848	.0058 503	.0041 616	.0032 171	.0020 284	.0014 576
.0107 696	.0078 176	.0056 479	.0040 622	.0026 926	.0020 178
.0140 586	.0103 609	.0076 000	.0055 502	.0040 466	.0029 243
.0182 083	.0136 203	.0101 411	.0075 177	.0055 593	.0040 699
.0234 000	.0177 013	.0134 195	.0100 954	.0075 649	.0056 457
.0298 405 ⁺	.0229 766	.0176 114	.0134 415 ⁺	.0102 179	.0075 362
.0377 620	.0294 877	.0229 234	.0172 455	.0136 862	.0103 199
.0474 217	.0375 449	.0295 941	.0232 494	.0174 647	.0134 962
.0590 987	.0474 260	.0375 949	.0301 549	.0232 634	.0177 013
.0730 899	.0594 375 ⁺	.0481 282	.0395 148	.0311 716	.0239 649
.0897 032	.0739 011	.0606 273	.0495 411	.0404 410	.0324 173
.1092 489	.0911 555 ⁺	.0757 459	.0626 920	.0517 059	.0424 946
.1320 277	.1115 419	.0938 541	.0786 216	.0657 084	.0554 649
.1583 163	.1353 873	.1153 243	.0978 699	.0827 645 ⁺	.0707 274
.1883 500 ⁺	.1629 061	.1403 185 ⁺	.1206 092	.1034 494	.0886 294

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .91$ to 1.00 $q = 5$

	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$
$B(p, q) = .2477\ 3938 \times \frac{1}{10^8}$	$.2035\ 0020 \times \frac{1}{10^8}$	$.1684\ 1396 \times \frac{1}{10^8}$	$.1403\ 4497 \times \frac{1}{10^8}$	$.1177\ 0$	
$.91$	$.9099\ 929$	$.8981\ 504$	$.8855\ 777$	$.8723\ 059$	$.8583\ 70$
$.92$	$.9398\ 367$	$.9313\ 869$	$.9223\ 174$	$.9126\ 385^-$	$.9023\ 6$
$.93$	$.9628\ 307$	$.9572\ 732$	$.9512\ 434$	$.9447\ 384$	$.9377\ 5$
$.94$	$.9792\ 883$	$.9760\ 000$	$.9723\ 938$	$.9684\ 616$	$.9641\ 90$
$.95$	$.9899\ 773$	$.9882\ 916$	$.9864\ 233$	$.9843\ 645^-$	$.9821\ 0$
$.96$	$.9960\ 464$	$.9953\ 437$	$.9945\ 565^+$	$.9936\ 800$	$.9927\ 0$
$.97$	$.9988\ 710$	$.9986\ 593$	$.9984\ 198$	$.9981\ 503$	$.9978\ 48$
$.98$	$.9998\ 212$	$.9997\ 859$	$.9997\ 455^+$	$.9996\ 997$	$.9996\ 4$
$.99$	$.9999\ 933$	$.9999\ 919$	$.9999\ 903$	$.9999\ 884$	$.9999\ 86$
1.00	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 000$	$1.0000\ 00$

TABLES OF THE INCOMPLETE β -FUNCTION

to 1.00

$q = 5$

p

$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$
$\cdot 8426\ 8716 \times \frac{1}{10^6}$	$\cdot 7187\ 6258 \times \frac{1}{10^6}$	$\cdot 6160\ 8221 \times \frac{1}{10^6}$	$\cdot 5395\ 1544 \times \frac{1}{10^6}$	$\cdot 4788\ 2392 \times \frac{1}{10^6}$	$\cdot 4294\ 5122$
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 011$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 019$	$\cdot 0000\ 010$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 033$	$\cdot 0000\ 018$	$\cdot 0000\ 010$	$\cdot 0000\ 005$	$\cdot 0000\ 003$	$\cdot 0000\ 002$
$\cdot 0000\ 055$	$\cdot 0000\ 031$	$\cdot 0000\ 017$	$\cdot 0000\ 010$	$\cdot 0000\ 005$	$\cdot 0000\ 003$
$\cdot 0000\ 090$	$\cdot 0000\ 052$	$\cdot 0000\ 030$	$\cdot 0000\ 017$	$\cdot 0000\ 010$	$\cdot 0000\ 005$
$\cdot 0000\ 146$	$\cdot 0000\ 086$	$\cdot 0000\ 050$	$\cdot 0000\ 029$	$\cdot 0000\ 017$	$\cdot 0000\ 010$
$\cdot 0000\ 235$	$\cdot 0000\ 141$	$\cdot 0000\ 084$	$\cdot 0000\ 050$	$\cdot 0000\ 029$	$\cdot 0000\ 017$
$\cdot 0000\ 374$	$\cdot 0000\ 228$	$\cdot 0000\ 138$	$\cdot 0000\ 083$	$\cdot 0000\ 050$	$\cdot 0000\ 029$
$\cdot 0000\ 587$	$\cdot 0000\ 364$	$\cdot 0000\ 225$	$\cdot 0000\ 148$	$\cdot 0000\ 083$	$\cdot 0000\ 050$
$\cdot 0000\ 911$	$\cdot 0000\ 575$	$\cdot 0000\ 362$	$\cdot 0000\ 222$	$\cdot 0000\ 148$	$\cdot 0000\ 083$
$\cdot 0001\ 390$	$\cdot 0000\ 868$	$\cdot 0000\ 575$	$\cdot 0000\ 362$	$\cdot 0000\ 222$	$\cdot 0000\ 148$
$\cdot 0002\ 126$	$\cdot 0001\ 388$	$\cdot 0000\ 904$	$\cdot 0000\ 586$	$\cdot 0000\ 362$	$\cdot 0000\ 222$
$\cdot 0003\ 195$	$\cdot 0002\ 123$	$\cdot 0001\ 395$	$\cdot 0000\ 912$	$\cdot 0000\ 586$	$\cdot 0000\ 362$
$\cdot 0004\ 755$	$\cdot 0003\ 211$	$\cdot 0002\ 161$	$\cdot 0001\ 150$	$\cdot 0000\ 912$	$\cdot 0000\ 586$
$\cdot 0007\ 004$	$\cdot 0004\ 807$	$\cdot 0003\ 288$	$\cdot 0002\ 242$	$\cdot 0001\ 151$	$\cdot 0001\ 014$
$\cdot 0010\ 216$	$\cdot 0007\ 124$	$\cdot 0004\ 951$	$\cdot 0003\ 431$	$\cdot 0002\ 150$	$\cdot 0001\ 644$
$\cdot 0014\ 755$	$\cdot 0010\ 452$	$\cdot 0007\ 379$	$\cdot 0005\ 194$	$\cdot 0003\ 615$	$\cdot 0002\ 550$
$\cdot 0021\ 108$	$\cdot 0015\ 184$	$\cdot 0010\ 886$	$\cdot 0007\ 781$	$\cdot 0005\ 515$	$\cdot 0004\ 941$
$\cdot 0029\ 911$	$\cdot 0021\ 843$	$\cdot 0015\ 890$	$\cdot 0011\ 538$	$\cdot 0008\ 448$	$\cdot 0007\ 024$
$\cdot 0041\ 987$	$\cdot 0031\ 120$	$\cdot 0022\ 092$	$\cdot 0016\ 945$	$\cdot 0012\ 448$	$\cdot 0010\ 110$
$\cdot 0058\ 393$	$\cdot 0043\ 016$	$\cdot 0032\ 923$	$\cdot 0024\ 608$	$\cdot 0018\ 190$	$\cdot 0014\ 641$
$\cdot 0080\ 459$	$\cdot 0061\ 385$	$\cdot 0046\ 684$	$\cdot 0035\ 300$	$\cdot 0026\ 000$	$\cdot 0020\ 174$
$\cdot 0100\ 847$	$\cdot 0084\ 994$	$\cdot 0065\ 560$	$\cdot 0050\ 420$	$\cdot 0035\ 667$	$\cdot 0026\ 555$
$\cdot 0148\ 596$	$\cdot 0116\ 578$	$\cdot 0091\ 178$	$\cdot 0071\ 104$	$\cdot 0055\ 295$	$\cdot 0037\ 000$
$\cdot 0199\ 175$	$\cdot 0158\ 397$	$\cdot 0125\ 585$	$\cdot 0099\ 284$	$\cdot 0078\ 274$	$\cdot 0054\ 599$
$\cdot 0264\ 523$	$\cdot 0213\ 193$	$\cdot 0171\ 308$	$\cdot 0147\ 260$	$\cdot 0109\ 661$	$\cdot 0076\ 117$
$\cdot 0348\ 080$	$\cdot 0284\ 237$	$\cdot 0231\ 417$	$\cdot 0187\ 884$	$\cdot 0152\ 141$	$\cdot 0122\ 508$
$\cdot 0453\ 792$	$\cdot 0375\ 355$	$\cdot 0309\ 572$	$\cdot 0254\ 612$	$\cdot 0208\ 895$	$\cdot 0170\ 895$
$\cdot 0586\ 084$	$\cdot 0490\ 933$	$\cdot 0410\ 954$	$\cdot 0341\ 570$	$\cdot 0281\ 085$	$\cdot 0245\ 164$
$\cdot 0740\ 797$	$\cdot 0635\ 886$	$\cdot 0537\ 761$	$\cdot 0451\ 567$	$\cdot 0384\ 582$	$\cdot 0340\ 242$
$\cdot 0950\ 060$	$\cdot 0815\ 534$	$\cdot 0698\ 148$	$\cdot 0596\ 679$	$\cdot 0507\ 660$	$\cdot 0461\ 144$
$\cdot 1192\ 103$	$\cdot 1035\ 504$	$\cdot 0897\ 063$	$\cdot 0787\ 156$	$\cdot 0688\ 155$	$\cdot 0623\ 000$
$\cdot 1480\ 988$	$\cdot 1301\ 424$	$\cdot 1130\ 656$	$\cdot 1027\ 260$	$\cdot 0907\ 419$	$\cdot 0823\ 000$
$\cdot 1821\ 257$	$\cdot 1618\ 631$	$\cdot 1444\ 912$	$\cdot 1266\ 982$	$\cdot 1159\ 150$	$\cdot 1050\ 000$
$\cdot 2216\ 493$	$\cdot 1991\ 797$	$\cdot 1785\ 454$	$\cdot 1560\ 640$	$\cdot 1424\ 605$	$\cdot 1290\ 400$
$\cdot 2668\ 806$	$\cdot 2423\ 956$	$\cdot 2196\ 499$	$\cdot 1985\ 744$	$\cdot 1791\ 106$	$\cdot 1624\ 000$
$\cdot 3178\ 263$	$\cdot 2916\ 779$	$\cdot 2670\ 810$	$\cdot 2440\ 314$	$\cdot 2225\ 082$	$\cdot 2024\ 200$
$\cdot 3742\ 391$	$\cdot 3469\ 004$	$\cdot 3208\ 825$	$\cdot 2962\ 075$	$\cdot 2728\ 806$	$\cdot 2509\ 200$
$\cdot 4355\ 177$	$\cdot 4076\ 218$	$\cdot 3807\ 482$	$\cdot 3580\ 000$		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .49$ to 1.00 $q = 5$

p	$p = 35$	$p = 36$	$p = 37$	$p = 38$	$p = 39$
$I_x(p, q) = 41.36877 \times 10^{-6}$		40.404707×10^{-6}	39.688088×10^{-6}	$38.9510935 \times 10^{-6}$	38.277777×10^{-6}
.49	.000000001				
.50	.000000002	.000000001	.000000001		
.51	.000000003	.000000002	.000000001	.000000001	
.52	.000000004	.000000003	.000000002	.000000001	.000000001
.53	.000000005	.000000004	.000000003	.000000002	.000000001
.54	.000000008	.000000007	.000000005	.000000004	.000000003
.55	.000000012	.000000011	.000000008	.000000007	.000000005
.56	.000000017	.000000016	.000000012	.000000011	.000000008
.57	.000000023	.000000022	.000000017	.000000016	.000000012
.58	.000000030	.000000029	.000000022	.000000021	.000000016
.59	.000000038	.000000037	.000000028	.000000027	.000000021
.60	.000000046	.000000045	.000000035	.000000034	.000000027
.61	.000000055	.000000054	.000000042	.000000041	.000000033
.62	.000000064	.000000063	.000000050	.000000049	.000000040
.63	.000000073	.000000072	.000000058	.000000057	.000000046
.64	.000000083	.000000082	.000000066	.000000065	.000000053
.65	.000000093	.000000092	.000000074	.000000073	.000000060
.66	.000000103	.000000102	.000000082	.000000081	.000000067
.67	.000000113	.000000112	.000000090	.000000089	.000000074
.68	.000000123	.000000122	.000000098	.000000097	.000000080
.69	.000000133	.000000132	.000000106	.000000105	.000000087
.70	.000000143	.000000142	.000000114	.000000113	.000000094
.71	.000000153	.000000152	.000000122	.000000121	.000000101
.72	.000000163	.000000162	.000000130	.000000129	.000000109
.73	.000000173	.000000172	.000000138	.000000137	.000000117
.74	.000000183	.000000182	.000000146	.000000145	.000000125
.75	.000000193	.000000192	.000000154	.000000153	.000000133
.76	.000000203	.000000202	.000000162	.000000161	.000000141
.77	.000000213	.000000212	.000000170	.000000169	.000000149
.78	.000000223	.000000222	.000000178	.000000177	.000000157
.79	.000000233	.000000232	.000000186	.000000185	.000000165
.80	.000000243	.000000242	.000000194	.000000193	.000000173
.81	.000000253	.000000252	.000000202	.000000201	.000000181
.82	.000000263	.000000262	.000000210	.000000209	.000000189
.83	.000000273	.000000272	.000000218	.000000217	.000000197
.84	.000000283	.000000282	.000000226	.000000225	.000000205
.85	.000000293	.000000292	.000000234	.000000233	.000000213
.86	.000000303	.000000302	.000000242	.000000241	.000000221
.87	.000000313	.000000312	.000000250	.000000249	.000000229
.88	.000000323	.000000322	.000000258	.000000257	.000000237
.89	.000000333	.000000332	.000000266	.000000265	.000000245
.90	.000000343	.000000342	.000000274	.000000273	.000000253
.91	.000000353	.000000352	.000000282	.000000281	.000000261
.92	.000000363	.000000362	.000000290	.000000289	.000000269
.93	.000000373	.000000372	.000000298	.000000297	.000000277
.94	.000000383	.000000382	.000000306	.000000305	.000000285
.95	.000000393	.000000392	.000000314	.000000313	.000000293
.96	.000000403	.000000402	.000000322	.000000321	.000000301
.97	.000000413	.000000412	.000000330	.000000329	.000000309
.98	.000000423	.000000422	.000000338	.000000337	.000000317
.99	.000000433	.000000432	.000000346	.000000345	.000000325
1.00	.000000443	.000000442	.000000354	.000000353	.000000333
.49	.000000001				
.50	.000000002	.000000001	.000000001		
.51	.000000003	.000000002	.000000001	.000000001	
.52	.000000004	.000000003	.000000002	.000000001	.000000001
.53	.000000005	.000000004	.000000003	.000000002	.000000001
.54	.000000008	.000000007	.000000005	.000000004	.000000003
.55	.000000012	.000000011	.000000008	.000000007	.000000005
.56	.000000017	.000000016	.000000012	.000000011	.000000008
.57	.000000023	.000000022	.000000017	.000000016	.000000012
.58	.000000030	.000000029	.000000022	.000000021	.000000016
.59	.000000038	.000000037	.000000028	.000000027	.000000021
.60	.000000046	.000000045	.000000035	.000000034	.000000027
.61	.000000055	.000000054	.000000042	.000000041	.000000033
.62	.000000064	.000000063	.000000050	.000000049	.000000040
.63	.000000073	.000000072	.000000058	.000000057	.000000046
.64	.000000083	.000000082	.000000066	.000000065	.000000053
.65	.000000093	.000000092	.000000074	.000000073	.000000060
.66	.000000103	.000000102	.000000082	.000000081	.000000067
.67	.000000113	.000000112	.000000090	.000000089	.000000074
.68	.000000123	.000000122	.000000098	.000000097	.000000080
.69	.000000133	.000000132	.000000106	.000000105	.000000087
.70	.000000143	.000000142	.000000114	.000000113	.000000094
.71	.000000153	.000000152	.000000122	.000000121	.000000101
.72	.000000163	.000000162	.000000130	.000000129	.000000109
.73	.000000173	.000000172	.000000138	.000000137	.000000117
.74	.000000183	.000000182	.000000146	.000000145	.000000125
.75	.000000193	.000000192	.000000154	.000000153	.000000133
.76	.000000203	.000000202	.000000162	.000000161	.000000141
.77	.000000213	.000000212	.000000170	.000000169	.000000149
.78	.000000223	.000000222	.000000178	.000000177	.000000157
.79	.000000233	.000000232	.000000186	.000000185	.000000165
.80	.000000243	.000000242	.000000194	.000000193	.000000173
.81	.000000253	.000000252	.000000202	.000000201	.000000181
.82	.000000263	.000000262	.000000210	.000000209	.000000189
.83	.000000273	.000000272	.000000218	.000000217	.000000197
.84	.000000283	.000000282	.000000226	.000000225	.000000205
.85	.000000293	.000000292	.000000234	.000000233	.000000213
.86	.000000303	.000000302	.000000242	.000000241	.000000221
.87	.000000313	.000000312	.000000250	.000000249	.000000229
.88	.000000323	.000000322	.000000258	.000000257	.000000237
.89	.000000333	.000000332	.000000266	.000000265	.000000245
.90	.000000343	.000000342	.000000274	.000000273	.000000253
.91	.000000353	.000000352	.000000282	.000000281	.000000261
.92	.000000363	.000000362	.000000290	.000000289	.000000269
.93	.000000373	.000000372	.000000298	.000000297	.000000277
.94	.000000383	.000000382	.000000306	.000000305	.000000285
.95	.000000393	.000000392	.000000314	.000000313	.000000293
.96	.000000403	.000000402	.000000322	.000000321	.000000301
.97	.000000413	.000000412	.000000330	.000000329	.000000309
.98	.000000423	.000000422	.000000338	.000000337	.000000317
.99	.000000433	.000000432	.000000346	.000000345	.000000325
1.00	.000000443	.000000442	.000000354	.000000353	.000000333

TABLES OF THE INCOMPLETE β -FUNCTION

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$q = 6.5$

$p = 6$

$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$\cdot 1730\ 2225 \times \frac{1}{10^5}$	$\cdot 1211\ 7644 \times \frac{1}{10^5}$	$\cdot 8651\ 1124 \times \frac{1}{10^4}$	$\cdot 6283\ 2229 \times \frac{1}{10^4}$	$\cdot 4634\ 5245 \times \frac{1}{10^4}$	$\cdot 3466\ 6057$
$\cdot 0000\ 001$	$\cdot 0000\ 002$				
$\cdot 0000\ 006$	$\cdot 0000\ 007$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 024$	$\cdot 0000\ 007$	$\cdot 0000\ 008$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 076$	$\cdot 0000\ 025$	$\cdot 0000\ 008$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 0000\ 196$	$\cdot 0000\ 069$	$\cdot 0000\ 024$	$\cdot 0000\ 008$	$\cdot 0000\ 008$	$\cdot 0000\ 003$
$\cdot 0000\ 445$	$\cdot 0000\ 166$	$\cdot 0000\ 061$	$\cdot 0000\ 022$	$\cdot 0000\ 021$	$\cdot 0000\ 008$
$\cdot 0000\ 908$	$\cdot 0000\ 360$	$\cdot 0000\ 140$	$\cdot 0000\ 054$	$\cdot 0000\ 048$	$\cdot 0000\ 019$
$\cdot 0001\ 711$	$\cdot 0000\ 714$	$\cdot 0000\ 294$	$\cdot 0000\ 119$		
$\cdot 0003\ 019$	$\cdot 0001\ 320$	$\cdot 0000\ 569$	$\cdot 0000\ 243$	$\cdot 0000\ 102$	$\cdot 0000\ 043$
$\cdot 0005\ 043$	$\cdot 0002\ 301$	$\cdot 0001\ 036$	$\cdot 0000\ 461$	$\cdot 0000\ 203$	$\cdot 0000\ 088$
$\cdot 0008\ 048$	$\cdot 0003\ 820$	$\cdot 0001\ 789$	$\cdot 0000\ 828$	$\cdot 0000\ 379$	$\cdot 0000\ 172$
$\cdot 0012\ 353$	$\cdot 0006\ 081$	$\cdot 0002\ 954$	$\cdot 0001\ 418$	$\cdot 0000\ 673$	$\cdot 0000\ 317$
$\cdot 0018\ 330$	$\cdot 0009\ 334$	$\cdot 0004\ 691$	$\cdot 0002\ 330$	$\cdot 0001\ 144$	$\cdot 0000\ 557$
$\cdot 0026\ 412$	$\cdot 0013\ 880$	$\cdot 0007\ 200$	$\cdot 0003\ 691$	$\cdot 0001\ 872$	$\cdot 0000\ 940$
$\cdot 0037\ 085$	$\cdot 0020\ 074$	$\cdot 0010\ 727$	$\cdot 0005\ 665$	$\cdot 0002\ 960$	$\cdot 0001\ 531$
$\cdot 0050\ 884$	$\cdot 0028\ 321$	$\cdot 0015\ 562$	$\cdot 0008\ 452$	$\cdot 0004\ 542$	$\cdot 0002\ 417$
$\cdot 0068\ 397$	$\cdot 0039\ 082$	$\cdot 0022\ 049$	$\cdot 0012\ 296$	$\cdot 0006\ 785$	$\cdot 0003\ 707$
$\cdot 0090\ 250$	$\cdot 0052\ 867$	$\cdot 0030\ 579$	$\cdot 0017\ 485$	$\cdot 0009\ 893$	$\cdot 0005\ 544$
$\cdot 0117\ 106$	$\cdot 0070\ 235$	$\cdot 0041\ 599$	$\cdot 0024\ 358$	$\cdot 0014\ 114$	$\cdot 0008\ 100$
$\cdot 0149\ 651$	$\cdot 0091\ 789$	$\cdot 0055\ 603$	$\cdot 0033\ 303$	$\cdot 0019\ 740$	$\cdot 0011\ 589$
$\cdot 0188\ 590$	$\cdot 0118\ 171$	$\cdot 0073\ 137$	$\cdot 0044\ 759$	$\cdot 0027\ 110$	$\cdot 0016\ 265$
$\cdot 0234\ 636$	$\cdot 0150\ 051$	$\cdot 0094\ 791$	$\cdot 0059\ 217$	$\cdot 0036\ 616$	$\cdot 0022\ 429$
$\cdot 0288\ 494$	$\cdot 0188\ 125$	$\cdot 0121\ 195$	$\cdot 0077\ 217$	$\cdot 0048\ 699$	$\cdot 0030\ 428$
$\cdot 0350\ 856$	$\cdot 0233\ 099$	$\cdot 0153\ 015$	$\cdot 0099\ 346$	$\cdot 0063\ 854$	$\cdot 0040\ 662$
$\cdot 0422\ 387$	$\cdot 0285\ 687$	$\cdot 0190\ 942$	$\cdot 0126\ 235$	$\cdot 0082\ 625$	$\cdot 0053\ 585$
$\cdot 0503\ 710$	$\cdot 0346\ 590$	$\cdot 0235\ 686$	$\cdot 0158\ 549$	$\cdot 0105\ 605$	$\cdot 0069\ 700$
$\cdot 0595\ 402$	$\cdot 0416\ 494$	$\cdot 0287\ 968$	$\cdot 0196\ 987$	$\cdot 0133\ 432$	$\cdot 0089\ 565$
$\cdot 0697\ 976$	$\cdot 0496\ 054$	$\cdot 0348\ 505$	$\cdot 0242\ 267$	$\cdot 0166\ 781$	$\cdot 0113\ 787$
$\cdot 0811\ 875$	$\cdot 0585\ 882$	$\cdot 0418\ 003$	$\cdot 0295\ 122$	$\cdot 0206\ 363$	$\cdot 0143\ 018$
$\cdot 0937\ 462$	$\cdot 0686\ 536$	$\cdot 0497\ 143$	$\cdot 0356\ 287$	$\cdot 0252\ 912$	$\cdot 0177\ 952$
$\cdot 1075\ 009$	$\cdot 0798\ 511$	$\cdot 0586\ 568$	$\cdot 0426\ 490$	$\cdot 0307\ 180$	$\cdot 0219\ 321$
$\cdot 1224\ 692$	$\cdot 0922\ 225$	$\cdot 0686\ 876$	$\cdot 0506\ 437$	$\cdot 0369\ 924$	$\cdot 0267\ 879$
$\cdot 1386\ 584$	$\cdot 1058\ 011$	$\cdot 0798\ 602$	$\cdot 0596\ 803$	$\cdot 0441\ 893$	$\cdot 0324\ 402$
$\cdot 1560\ 651$	$\cdot 1206\ 108$	$\cdot 0922\ 210$	$\cdot 0698\ 217$	$\cdot 0523\ 823$	$\cdot 0389\ 672$
$\cdot 1746\ 748$	$\cdot 1366\ 654$	$\cdot 1058\ 081$	$\cdot 0811\ 249$	$\cdot 0616\ 416$	$\cdot 0464\ 468$
$\cdot 1944\ 616$	$\cdot 1539\ 675$	$\cdot 1206\ 501$	$\cdot 0936\ 401$	$\cdot 0720\ 330$	$\cdot 0549\ 551$
$\cdot 2153\ 885$	$\cdot 1725\ 088$	$\cdot 1367\ 657$	$\cdot 1074\ 090$	$\cdot 0836\ 166$	$\cdot 0645\ 651$
$\cdot 2374\ 070$	$\cdot 1922\ 689$	$\cdot 1541\ 621$	$\cdot 1224\ 639$	$\cdot 0964\ 456$	$\cdot 0753\ 455$
$\cdot 2604\ 580$	$\cdot 2132\ 157$	$\cdot 1728\ 350$	$\cdot 1388\ 267$	$\cdot 1105\ 643$	$\cdot 0873\ 588$
$\cdot 2844\ 717$	$\cdot 2353\ 050$	$\cdot 1927\ 680$	$\cdot 1565\ 078$	$\cdot 1260\ 076$	$\cdot 1006\ 603$
$\cdot 3093\ 686$	$\cdot 2584\ 808$	$\cdot 2139\ 317$	$\cdot 1755\ 054$	$\cdot 1427\ 995$	$\cdot 1152\ 964$
$\cdot 3350\ 600$	$\cdot 2826\ 758$	$\cdot 2362\ 845$	$\cdot 1958\ 048$	$\cdot 1609\ 517$	$\cdot 1313\ 031$
$\cdot 3614\ 487$	$\cdot 3078\ 114$	$\cdot 2597\ 715$	$\cdot 2173\ 780$	$\cdot 1804\ 633$	$\cdot 1487\ 052$
$\cdot 3884\ 302$	$\cdot 3337\ 988$	$\cdot 2843\ 256$	$\cdot 2401\ 832$	$\cdot 2013\ 195$	$\cdot 1675\ 141$
$\cdot 4158\ 930$	$\cdot 3605\ 305$	$\cdot 3068\ 675$	$\cdot 2651\ 650$	$\cdot 2223\ 625$	$\cdot 1875\ 211$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61 \text{ to } .98$ $q = 6.5$

	$p = 6.5$	$p = 7$	$p = 7.5$	$p = 8$	$p =$
$B(p, q) = .1730\ 2225 \times \frac{1}{10^3}$		$.1211\ 7644 \times \frac{1}{10^3}$	$.8651\ 1124 \times \frac{1}{101}$	$.6283\ 2229 \times \frac{1}{104}$	$.4634$
x					
.61	.7846 115 ⁺	.7461 352	.7059 887	.6647 187	.6228
.62	.8055 384	.7695 671	.7317 269	.6925 089	.6524
.63	.8253 252	.7919 019	.7564 585 ⁻	.7194 285 ⁻	.6812
.64	.8439 349	.8130 753	.7800 908	.7453 564	.7092
.65	.8613 416	.8330 353	.8025 434	.7701 832	.7362
.66	.8775 308	.8517 425 ⁻	.8237 493	.7938 124	.7622
.67	.8924 991	.8691 703	.8436 551	.8161 615 ⁺	.7869
.68	.9062 538	.8853 051	.8622 219	.8371 634	.8103
.69	.9188 125 ⁻	.9001 455 ⁺	.8794 253	.8567 666	.8323
.70	.9302 024	.9137 027	.8952 554	.8749 361	.8528
.71	.9404 598	.9259 994	.9097 165 ⁺	.8916 531	.8718
.72	.9496 290	.9370 691	.9228 266	.9069 155 ⁺	.8893
.73	.9577 613	.9469 554	.9346 168	.9207 369	.9053
.74	.9649 144	.9557 110	.9451 302	.9331 461	.9197
.75	.9711 506	.9633 961	.9544 207	.9441 863	.9326
.76	.9765 364	.9700 775 ⁺	.9625 519	.9539 134	.9441
.77	.9811 410	.9758 275 ⁻	.9695 957	.9623 952	.9541
.78	.9850 349	.9807 217	.9756 302	.9697 090	.9629
.79	.9882 894	.9848 385 ⁺	.9807 388	.9759 404	.9703
.80	.9909 750 ⁻	.9882 571	.9850 078	.9811 808	.9767
.81	.9931 603	.9910 564	.9885 254	.9855 258	.9820
.82	.9949 116	.9933 136	.9913 794	.9890 728	.9863
.83	.9962 915 ⁺	.9951 031	.9936 558	.9919 193	.9898
.84	.9973 588	.9964 954	.9954 375 ⁺	.9941 607	.9926
.85	.9981 670	.9975 560	.9968 030	.9958 887	.9947
.86	.9987 647	.9983 451	.9978 249	.9971 895 ⁺	.9964
.87	.9991 952	.9989 166	.9985 693	.9981 426	.9976
.88	.9994 957	.9993 179	.9990 950 ⁺	.9988 196	.9984
.89	.9996 981	.9995 898	.9994 532	.9992 834	.9990
.90	.9998 289	.9997 664	.9996 871	.9995 881	.9994
.91	.9999 092	.9998 754	.9998 324	.9997 783	.9997
.92	.9999 555 ⁺	.9999 387	.9999 172	.9998 900	.9998
.93	.9999 804	.9999 728	.9999 631	.9999 507	.9999
.94	.9999 924	.9999 895 ⁻	.9999 856	.9999 807	.9999
.95	.9999 976	.9999 966	.9999 953	.9999 937	.9999
.96	.9999 994	.9999 992	.9999 988	.9999 984	.9999
.97	.9999 999	.9999 999	.9999 998	.9999 997	.9999
.98	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

$\cdot 08$ to $\cdot 70$

$q = 6.5$

$p =$

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$p, q) = \cdot 2626\ 2305 \times \frac{1}{10^4}$	$\cdot 2012\ 8678 \times \frac{1}{10^4}$	$\cdot 1559\ 3244 \times \frac{1}{10^4}$	$\cdot 1219\ 9199 \times \frac{1}{10^4}$	$\cdot 7668\ 0679 \times \frac{1}{10^5}$	$\cdot 4973\ 88$	
$\cdot 08$	$\cdot 0000\ 001$					
$\cdot 09$	$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 10$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$			
$\cdot 11$	$\cdot 0000\ 018$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 12$	$\cdot 0000\ 038$	$\cdot 0000\ 016$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 13$	$\cdot 0000\ 077$	$\cdot 0000\ 034$	$\cdot 0000\ 015^+$	$\cdot 0000\ 007$	$\cdot 0000\ 001$	
$\cdot 14$	$\cdot 0000\ 147$	$\cdot 0000\ 068$	$\cdot 0000\ 031$	$\cdot 0000\ 014$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 15$	$\cdot 0000\ 268$	$\cdot 0000\ 128$	$\cdot 0000\ 061$	$\cdot 0000\ 029$	$\cdot 0000\ 006$	$\cdot 0000\ 001$
$\cdot 16$	$\cdot 0000\ 468$	$\cdot 0000\ 231$	$\cdot 0000\ 113$	$\cdot 0000\ 055^-$	$\cdot 0000\ 013$	$\cdot 0000\ 001$
$\cdot 17$	$\cdot 0000\ 785^+$	$\cdot 0000\ 399$	$\cdot 0000\ 201$	$\cdot 0000\ 101$	$\cdot 0000\ 025^-$	$\cdot 0000\ 001$
$\cdot 18$	$\cdot 0001\ 275^-$	$\cdot 0000\ 667$	$\cdot 0000\ 346$	$\cdot 0000\ 178$	$\cdot 0000\ 046$	$\cdot 0000\ 011$
$\cdot 19$	$\cdot 0002\ 008$	$\cdot 0001\ 078$	$\cdot 0000\ 575^-$	$\cdot 0000\ 304$	$\cdot 0000\ 084$	$\cdot 0000\ 021$
$\cdot 20$	$\cdot 0003\ 079$	$\cdot 0001\ 696$	$\cdot 0000\ 927$	$\cdot 0000\ 503$	$\cdot 0000\ 145^+$	$\cdot 0000\ 041$
$\cdot 21$	$\cdot 0004\ 608$	$\cdot 0002\ 600$	$\cdot 0001\ 456$	$\cdot 0000\ 809$	$\cdot 0000\ 245^+$	$\cdot 0000\ 071$
$\cdot 22$	$\cdot 0006\ 745^-$	$\cdot 0003\ 893$	$\cdot 0002\ 230$	$\cdot 0001\ 269$	$\cdot 0000\ 403$	$\cdot 0000\ 111$
$\cdot 23$	$\cdot 0009\ 674$	$\cdot 0005\ 707$	$\cdot 0003\ 342$	$\cdot 0001\ 943$	$\cdot 0000\ 645^-$	$\cdot 0000\ 201$
$\cdot 24$	$\cdot 0013\ 619$	$\cdot 0008\ 204$	$\cdot 0004\ 905^-$	$\cdot 0002\ 912$	$\cdot 0001\ 007$	$\cdot 0000\ 341$
$\cdot 25$	$\cdot 0018\ 848$	$\cdot 0011\ 582$	$\cdot 0007\ 064$	$\cdot 0004\ 279$	$\cdot 0001\ 541$	$\cdot 0000\ 581$
$\cdot 26$	$\cdot 0025\ 672$	$\cdot 0016\ 080$	$\cdot 0009\ 998$	$\cdot 0006\ 174$	$\cdot 0002\ 310$	$\cdot 0000\ 821$
$\cdot 27$	$\cdot 0034\ 457$	$\cdot 0021\ 982$	$\cdot 0013\ 921$	$\cdot 0008\ 756$	$\cdot 0003\ 400$	$\cdot 0001\ 261$
$\cdot 28$	$\cdot 0045\ 615^+$	$\cdot 0029\ 620$	$\cdot 0019\ 093$	$\cdot 0012\ 224$	$\cdot 0004\ 919$	$\cdot 0001\ 931$
$\cdot 29$	$\cdot 0059\ 618$	$\cdot 0039\ 376$	$\cdot 0025\ 819$	$\cdot 0016\ 816$	$\cdot 0007\ 002$	$\cdot 0002\ 811$
$\cdot 30$	$\cdot 0076\ 988$	$\cdot 0051\ 688$	$\cdot 0034\ 454$	$\cdot 0022\ 813$	$\cdot 0009\ 818$	$\cdot 0004\ 111$
$\cdot 31$	$\cdot 0098\ 302$	$\cdot 0067\ 050^+$	$\cdot 0045\ 409$	$\cdot 0030\ 548$	$\cdot 0013\ 574$	$\cdot 0005\ 991$
$\cdot 32$	$\cdot 0124\ 189$	$\cdot 0086\ 011$	$\cdot 0059\ 149$	$\cdot 0040\ 408$	$\cdot 0018\ 519$	$\cdot 0008\ 331$
$\cdot 33$	$\cdot 0155\ 325^-$	$\cdot 0109\ 176$	$\cdot 0076\ 200$	$\cdot 0052\ 836$	$\cdot 0024\ 948$	$\cdot 0011\ 551$
$\cdot 34$	$\cdot 0192\ 430$	$\cdot 0137\ 202$	$\cdot 0097\ 144$	$\cdot 0068\ 335^+$	$\cdot 0033\ 213$	$\cdot 0015\ 791$
$\cdot 35$	$\cdot 0236\ 261$	$\cdot 0170\ 798$	$\cdot 0122\ 622$	$\cdot 0087\ 468$	$\cdot 0043\ 719$	$\cdot 0021\ 331$
$\cdot 36$	$\cdot 0287\ 603$	$\cdot 0210\ 717$	$\cdot 0153\ 330$	$\cdot 0110\ 859$	$\cdot 0056\ 937$	$\cdot 0028\ 631$
$\cdot 37$	$\cdot 0347\ 260$	$\cdot 0257\ 749$	$\cdot 0190\ 016$	$\cdot 0139\ 195^-$	$\cdot 0073\ 397$	$\cdot 0037\ 831$
$\cdot 38$	$\cdot 0416\ 043$	$\cdot 0312\ 713$	$\cdot 0233\ 471$	$\cdot 0173\ 216$	$\cdot 0093\ 702$	$\cdot 0049\ 631$
$\cdot 39$	$\cdot 0494\ 762$	$\cdot 0376\ 449$	$\cdot 0284\ 529$	$\cdot 0213\ 716$	$\cdot 0118\ 518$	$\cdot 0064\ 331$
$\cdot 40$	$\cdot 0584\ 206$	$\cdot 0449\ 803$	$\cdot 0344\ 048$	$\cdot 0261\ 538$	$\cdot 0148\ 580$	$\cdot 0082\ 631$
$\cdot 41$	$\cdot 0685\ 133$	$\cdot 0533\ 614$	$\cdot 0412\ 907$	$\cdot 0317\ 560$	$\cdot 0184\ 687$	$\cdot 0105\ 231$
$\cdot 42$	$\cdot 0798\ 252$	$\cdot 0628\ 701$	$\cdot 0491\ 990$	$\cdot 0382\ 687$	$\cdot 0227\ 699$	$\cdot 0132\ 731$
$\cdot 43$	$\cdot 0924\ 211$	$\cdot 0735\ 849$	$\cdot 0582\ 168$	$\cdot 0457\ 842$	$\cdot 0278\ 527$	$\cdot 0166\ 031$
$\cdot 44$	$\cdot 1063\ 576$	$\cdot 0855\ 786$	$\cdot 0684\ 290$	$\cdot 0543\ 945^-$	$\cdot 0338\ 129$	$\cdot 0206\ 031$
$\cdot 45$	$\cdot 1216\ 819$	$\cdot 0989\ 173$	$\cdot 0799\ 162$	$\cdot 0641\ 903$	$\cdot 0407\ 496$	$\cdot 0253\ 631$
$\cdot 46$	$\cdot 1384\ 302$	$\cdot 1136\ 583$	$\cdot 0927\ 527$	$\cdot 0752\ 591$	$\cdot 0487\ 636$	$\cdot 0309\ 831$
$\cdot 47$	$\cdot 1566\ 261$	$\cdot 1298\ 483$	$\cdot 1070\ 050^-$	$\cdot 0876\ 828$	$\cdot 0579\ 562$	$\cdot 0375\ 831$
$\cdot 48$	$\cdot 1762\ 793$	$\cdot 1475\ 219$	$\cdot 1227\ 296$	$\cdot 1015\ 366$	$\cdot 0684\ 272$	$\cdot 0452\ 531$
$\cdot 49$	$\cdot 1973\ 847$	$\cdot 1667\ 000$	$\cdot 1399\ 714$	$\cdot 1168\ 859$	$\cdot 0802\ 726$	$\cdot 0541\ 031$
$\cdot 50$	$\cdot 2199\ 211$	$\cdot 1873\ 883$	$\cdot 1587\ 616$	$\cdot 1337\ 852$	$\cdot 0935\ 828$	$\cdot 0642\ 631$
$\cdot 51$	$\cdot 2438\ 504$	$\cdot 2095\ 760$	$\cdot 1791\ 161$	$\cdot 1522\ 751$	$\cdot 1084\ 400$	$\cdot 0758\ 831$

TABLE I. THE $I_{\omega}(p, q)$ FUNCTION[illegible]

TABLES OF THE INCOMPLETE β -FUNCTION

16 to 80		$q = 6.5$				$p = 1$
$p = 14$		$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$p, q) = .3315\ 9213 \times \frac{1}{10^3}$		$.2264\ 5316 \times \frac{1}{10^3}$	$.1579\ 9058 \times \frac{1}{10^3}$	$.1123\ 4885 \times \frac{1}{10^3}$	$.8127\ 3640 \times \frac{1}{10^3}$	$.5971\ 124$
16	.0000 001					
17	.0000 001					
18	.0000 003	.0000 001				
19	.0000 006	.0000 001				
20	.0000 011	.0000 003	.0000 001			
21	.0000 021	.0000 006	.0000 002			
22	.0000 038	.0000 011	.0000 003	.0000 001		
23	.0000 066	.0000 021	.0000 006	.0000 002	.0000 001	
24	.0000 113	.0000 037	.0000 012	.0000 004	.0000 001	
25	.0000 187	.0000 063	.0000 021	.0000 007	.0000 002	.0000 001
26	.0000 303	.0000 107	.0000 037	.0000 013	.0000 004	.0000 001
27	.0000 480	.0000 176	.0000 063	.0000 022	.0000 008	.0000 003
28	.0000 747	.0000 283	.0000 106	.0000 039	.0000 014	.0000 005
29	.0001 139	.0000 447	.0000 173	.0000 066	.0000 025	.0000 009
30	.0001 706	.0000 692	.0000 277	.0000 109	.0000 042	.0000 016
31	.0002 516	.0001 054	.0000 435	.0000 177	.0000 071	.0000 028
32	.0003 652	.0001 579	.0000 672	.0000 282	.0000 117	.0000 048
33	.0005 225	.0002 328	.0001 021	.0000 442	.0000 189	.0000 080
34	.0007 372	.0003 382	.0001 528	.0000 681	.0000 299	.0000 130
35	.0010 268	.0004 846	.0002 252	.0001 032	.0000 467	.0000 209
36	.0014 124	.0006 852	.0003 274	.0001 543	.0000 718	.0000 330
37	.0019 200	.0009 566	.0004 695	.0002 273	.0001 087	.0000 514
38	.0025 810	.0013 198	.0006 648	.0003 303	.0001 621	.0000 787
39	.0034 324	.0018 000	.0009 300	.0004 740	.0002 386	.0001 188
40	.0045 179	.0024 282	.0012 858	.0006 718	.0003 467	.0001 769
41	.0058 886	.0032 414	.0017 581	.0009 409	.0004 975	.0002 601
42	.0076 029	.0042 836	.0023 784	.0013 031	.0007 054	.0003 776
43	.0097 274	.0056 063	.0031 845	.0017 851	.0009 887	.0005 416
44	.0123 372	.0072 693	.0042 218	.0024 200	.0013 707	.0007 679
45	.0155 156	.0093 411	.0055 438	.0032 476	.0018 800	.0010 766
46	.0193 544	.0118 996	.0072 130	.0043 161	.0025 524	.0014 932
47	.0239 533	.0150 319	.0093 014	.0056 823	.0034 309	.0020 495
48	.0294 192	.0188 348	.0118 914	.0074 129	.0045 678	.0027 848
49	.0358 655 ⁺	.0234 141	.0150 758	.0095 855 ⁺	.0060 249	.0037 471
50	.0434 105 ⁺	.0288 843	.0189 580	.0122 888	.0078 754	.0049 944
51	.0521 758	.0353 674	.0236 520	.0156 233	.0102 039	.0065 955
52	.0622 843	.0429 921	.0292 817	.0197 016	.0131 082	.0086 321
53	.0738 579	.0518 911	.0359 798	.0246 480	.0166 991	.0111 989
54	.0870 143	.0621 998	.0438 867	.0305 982	.0211 008	.0144 052
55	.1018 647	.0740 530	.0531 479	.0376 978	.0264 509	.0183 751
56	.1185 095 ⁺	.0875 822	.0639 124	.0461 010	.0328 995 ⁺	.0232 478
57	.1370 356	.1029 116	.0763 289	.0559 683	.0406 080	.0291 773
58	.1575 123	.1201 546	.0905 424	.0674 634	.0497 469	.0363 315
59	.1799 876	.1394 096	.1066 902	.0807 498	.0604 934	.0448 904
60	.2044 848	.1607 552	.1248 060	.0950 862	.0730 277	.0550 436

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.99$ $q = 6.5$

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$B(p, q) = .3315\ 9213 \times \frac{1}{10^8}$		$.2264\ 5316 \times \frac{1}{10^8}$	$.1579\ 9058 \times \frac{1}{10^8}$	$.1123\ 4885 \times \frac{1}{10^8}$	$.8127\ 3010 \times \frac{1}{10^8}$
x					
.81	.9023 977	.8792 793	.8536 873	.8258 321	.7959 601
.82	.9220 723	.9027 556	.8811 080	.8572 551	.8313 601
.83	.9390 583	.9232 720	.9053 652	.8853 934	.8634 501
.84	.9534 348	.9408 468	.9263 957	.9100 841	.8919 401
.85	.9653 374	.9555 712	.9442 261	.9312 679	.9166 801
.86	.9749 514	.9676 050	.9589 704	.9489 921	.9376 301
.87	.9825 034	.9771 680	.9708 241	.9634 078	.9548 601
.88	.9882 495	.9845 281	.9800 526	.9747 602	.9685 901
.89	.9924 635 ⁺	.9899 874	.9869 755 ⁺	.9833 735 ⁺	.9791 301
.90	.9954 235 ⁺	.9938 652	.9919 484	.9896 304	.9868 601
.91	.9973 987	.9964 816	.9953 410	.9939 463	.9922 601
.92	.9986 371	.9981 401	.9975 151	.9967 426	.9958 001
.93	.9993 559	.9991 132	.9988 046	.9984 190	.9979 401
.94	.9997 340	.9996 305	.9994 975	.9993 295	.9991 201
.95	.9999 086	.9998 719	.9998 242	.9997 634	.9996 801
.96	.9999 759	.9999 660	.9999 529	.9999 360	.9999 101
.97	.9999 958	.9999 941	.9999 917	.9999 886	.9999 821
.98	.9999 997	.9999 995 ⁺	.9999 993	.9999 991	.9999 980
.99	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

7 to 80

$q = 6.5$

$p = 2$

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$q) = .4449\ 0732 \times \frac{1}{10^6}$	$.3357\ 7911 \times \frac{1}{10^6}$	$.2564\ 1314 \times \frac{1}{10^6}$	$.1979\ 3295 \times \frac{1}{10^6}$	$.1543\ 2060 \times \frac{1}{10^6}$	$.1214\ 326$	
7	.0000 001					
8	.0000 002	.0000 001				
9	.0000 003	.0000 001				
0	.0000 006	.0000 002	.0000 001			
1	.0000 011	.0000 004	.0000 002	.0000 001		
2	.0000 019	.0000 008	.0000 003	.0000 001		
3	.0000 033	.0000 014	.0000 006	.0000 002	.0000 001	
4	.0000 056	.0000 024	.0000 010	.0000 004	.0000 002	.0000 001
5	.0000 093	.0000 041	.0000 018	.0000 008	.0000 003	.0000 001
6	.0000 150 ⁺	.0000 068	.0000 030	.0000 013	.0000 006	.0000 003
7	.0000 240	.0000 111	.0000 051	.0000 023	.0000 011	.0000 005
8	.0000 378	.0000 180	.0000 085 ⁻	.0000 040	.0000 018	.0000 008
9	.0000 585 ⁺	.0000 286	.0000 138	.0000 066	.0000 032	.0000 015
0	.0000 894	.0000 447	.0000 222	.0000 109	.0000 053	.0000 026
1	.0001 346	.0000 690	.0000 351	.0000 177	.0000 089	.0000 044
2	.0002 001	.0001 051	.0000 547	.0000 282	.0000 145 ⁻	.0000 074
3	.0002 937	.0001 578	.0000 841	.0000 444	.0000 233	.0000 121
4	.0004 259	.0002 340	.0001 275 ⁺	.0000 689	.0000 370	.0000 197
5	.0006 104	.0003 429	.0001 910	.0001 055 ⁺	.0000 579	.0000 314
6	.0008 649	.0004 964	.0002 825 ⁺	.0001 595 ⁺	.0000 894	.0000 493
7	.0012 123	.0007 106	.0004 130	.0002 382	.0001 364	.0000 775
8	.0016 813	.0010 059	.0005 968	.0003 513	.0002 054	.0001 192
9	.0023 079	.0014 088	.0008 528	.0005 123	.0003 055 ⁺	.0001 810
0	.0031 369	.0019 527	.0012 056	.0007 386	.0004 493	.0002 711
1	.0042 225 ⁺	.0026 795 ⁻	.0016 864	.0010 533	.0006 533	.0004 021
2	.0056 307	.0036 408	.0023 350 ⁺	.0014 863	.0009 394	.0005 891
3	.0074 399	.0048 998	.0032 010	.0020 755 ⁻	.0013 363	.0008 544
4	.0097 429	.0065 330	.0043 456	.0028 691	.0018 812	.0012 251
5	.0126 476	.0086 312	.0058 437	.0039 272	.0026 211	.0017 381
6	.0162 783	.0113 020	.0077 854	.0053 238	.0036 157	.0024 391
7	.0207 758	.0146 700	.0102 782	.0071 490	.0049 389	.0033 901
8	.0262 983	.0188 787	.0134 482	.0095 111	.0066 816	.0046 641
9	.0330 198	.0240 901	.0174 417	.0125 386	.0089 539	.0063 541
0	.0411 295 ⁻	.0304 852	.0224 260	.0163 816	.0118 877	.0085 731
1	.0508 293	.0382 627	.0285 894	.0212 135 ⁺	.0156 383	.0114 581
2	.0623 302	.0476 366	.0361 406	.0272 313	.0203 865 ⁺	.0151 701
3	.0758 482	.0588 335 ⁺	.0453 069	.0346 547	.0263 390	.0198 991
4	.0915 982	.0720 878	.0563 308	.0437 252	.0337 285 ⁻	.0258 641
5	.1097 873	.0876 355 ⁻	.0694 657	.0547 027	.0428 121	.0333 121
6	.1306 066	.1057 070	.0849 692	.0678 605 ⁺	.0538 686	.0425 171
7	.1542 216	.1265 180	.1030 952	.0834 786	.0671 926	.0537 801
8	.1807 627	.1502 589	.1240 838	.1018 349	.0830 878	.0674 181
9	.2103 140	.1770 838	.1481 498	.1231 942	.1018 571	.0837 601
0	.2429 029	.2070 974	.1754 693	.1477 946	.1237 899	.1031 351

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to 1.00 $q = 6.5$

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$B(p, q) = .4449\ 0732 \times \frac{x}{10^8}$	$.3357\ 7911 \times \frac{x}{10^8}$	$.2564\ 1314 \times \frac{x}{10^8}$	$.1979\ 3295 \times \frac{x}{10^8}$	$.1543\ 206$	
x					
.81	.7314 059	.6973 416	.6625 231	.6272 693	.5918 852
.82	.7743 498	.7437 126	.7120 105 ⁻	.6795 157	.6464 982
.83	.8142 355 ⁻	.7873 090	.7591 066	.7298 467	.6997 535
.84	.8505 201	.8274 492	.8029 939	.7773 159	.7505 885
.85	.8827 810	.8635 646	.8429 527	.8210 526	.7979 860
.86	.9107 410	.8952 349	.8784 071	.8603 173	.8410 398
.87	.9342 870	.9222 167	.9089 653	.8945 544	.8790 187
.88	.9534 783	.9444 620	.9344 495 ⁺	.9234 358	.9114 260
.89	.9685 427	.9621 224	.9549 119	.9468 901	.9380 435
.90	.9798 594	.9755 387	.9706 317	.9651 112	.9589 548
.91	.9879 289	.9852 118	.9820 917	.9785 425 ⁺	.9745 405
.92	.9933 315 ⁺	.9917 592	.9899 338	.9878 346	.9854 415
.93	.9966 772	.9958 578	.9948 961	.9937 782	.9924 900
.94	.9985 531	.9981 805 ⁺	.9977 386	.9972 192	.9966 143
.95	.9994 758	.9993 351	.9991 663	.9989 660	.9987 301
.96	.9998 545 ⁻	.9998 138	.9997 645 ⁺	.9997 054	.9996 350
.97	.9999 735 ⁻	.9999 658	.9999 563	.9999 449	.9999 311
.98	.9999 978	.9999 971	.9999 962	.9999 952	.9999 940
.99	1.0000 000	1.0000 000	1.0000 000	.9999 999	.9999 999
1.00				1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

5 to 1.00

$q = 6.5$

$p = 2$

	$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$
$q) = .9637\ 5084 \times \frac{1}{10^7}$	$.7710\ 0067 \times \frac{1}{10^7}$	$.6214\ 0353 \times \frac{1}{10^7}$	$.5043\ 2750 \times \frac{1}{10^7}$	$.4119\ 8585 \times \frac{1}{10^7}$	$.3386\ 185$	
5	.0000 001					
6	.0000 001					
7	.0000 002	.0000 001				
8	.0000 004	.0000 002	.0000 001			
9	.0000 007	.0000 003	.0000 002	.0000 001		
0	.0000 012	.0000 006	.0000 003	.0000 001	.0000 001	
1	.0000 022	.0000 011	.0000 005 ⁺	.0000 003	.0000 001	.0000 001
2	.0000 037	.0000 019	.0000 009	.0000 005 ⁻	.0000 002	.0000 001
3	.0000 063	.0000 032	.0000 017	.0000 008	.0000 004	.0000 002
4	.0000 104	.0000 055 ⁻	.0000 029	.0000 015 ⁻	.0000 008	.0000 004
5	.0000 171	.0000 092	.0000 049	.0000 026	.0000 014	.0000 007
6	.0000 275 ⁺	.0000 152	.0000 083	.0000 045 ⁺	.0000 024	.0000 013
7	.0000 438	.0000 246	.0000 138	.0000 076	.0000 042	.0000 023
8	.0000 688	.0000 394	.0000 225 ⁻	.0000 128	.0000 072	.0000 041
9	.0001 066	.0000 624	.0000 363	.0000 210	.0000 121	.0000 069
0	.0001 630	.0000 973	.0000 578	.0000 341	.0000 201	.0000 117
1	.0002 464	.0001 500 ⁺	.0000 908	.0000 547	.0000 328	.0000 196
2	.0003 681	.0002 284	.0001 409	.0000 865 ⁺	.0000 529	.0000 321
3	.0005 434	.0003 435 ⁺	.0002 160	.0001 351	.0000 841	.0000 521
4	.0007 934	.0005 108	.0003 271	.0002 084	.0001 321	.0000 834
5	.0011 457	.0007 509	.0004 895 ⁺	.0003 175 ⁺	.0002 050 ⁻	.0001 317
6	.0016 367	.0010 917	.0007 243	.0004 782	.0003 142	.0002 055
7	.0023 136	.0015 700	.0010 598	.0007 118	.0004 759	.0003 167
8	.0032 369	.0022 339	.0015 337	.0010 477	.0007 124	.0004 823
9	.0044 831	.0031 456	.0021 957	.0015 251	.0010 545 ⁻	.0007 259
0	.0061 474	.0043 839	.0031 102	.0021 959	.0015 433	.0010 799
1	.0083 472	.0060 481	.0043 599	.0031 279	.0022 338	.0015 885
2	.0112 247	.0082 610	.0060 491	.0044 084	.0031 983	.0023 104
3	.0149 502	.0111 725 ⁻	.0083 077	.0061 484	.0045 300	.0033 235
4	.0197 240	.0149 629	.0112 951	.0084 866	.0063 483	.0047 289
5	.0257 785 ⁻	.0198 458	.0152 040	.0115 942	.0088 028	.0066 558
6	.0333 778	.0260 695 ⁺	.0202 635 ⁻	.0156 788	.0120 790	.0092 676
7	.0428 172	.0339 181	.0267 411	.0209 880	.0164 023	.0127 667
8	.0544 190	.0437 095 ⁺	.0349 436	.0278 119	.0220 426	.0174 003
9	.0685 270	.0557 923	.0452 154	.0364 838	.0293 164	.0234 642
0	.0854 972	.0705 383	.0579 341	.0473 780	.0385 874	.0313 058
1	.1056 851	.0883 324	.0735 023	.0609 047	.0502 640	.0413 241
2	.1294 297	.1095 581	.0923 360	.0775 004	.0647 929	.0539 661
3	.1570 340	.1345 786	.1148 470	.0976 135 ⁺	.0826 471	.0697 187
4	.1887 416	.1637 144	.1414 216	.1216 845 ⁻	.1043 090	.0890 939
5	.2247 115 ⁻	.1972 158	.1723 933	.1501 195 ⁻	.1302 459	.1126 081
6	.2649 909	.2352 339	.2080 118	.1832 591	.1608 793	.1407 524
7	.3094 890	.2777 896	.2484 089	.2213 420	.1965 477	.1739 560
8	.3579 531	.3247 431	.2935 626	.2644 645 ⁺	.2374 635 ⁺	.2125 416
9	.4090 402	.3757 657	.3429 655 ⁺	.3124 653	.2841 653	.2562 653

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .42$ to 1.00 $q = 6.5$

	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p =$
$B(p, q)$	$.2799\ 2463 \times \frac{1}{10^7}$	$.2326\ 6463 \times \frac{1}{10^7}$	$.1943\ 7804 \times \frac{1}{10^7}$	$.1631\ 8157 \times \frac{1}{10^7}$	$.137$
x					
.42	.0000 001				
.43	.0000 001	.0000 001			
.44	.0000 002	.0000 001			
.45	.0000 004	.0000 002	.0000 001		
.46	.0000 007	.0000 004	.0000 002	.0000 001	.0000
.47	.0000 013	.0000 007	.0000 004	.0000 002	.0000
.48	.0000 023	.0000 013	.0000 007	.0000 004	.0000
.49	.0000 040	.0000 023	.0000 013	.0000 007	.0000
.50	.0000 068	.0000 040	.0000 023	.0000 013	.0000
.51	.0000 116	.0000 069	.0000 041	.0000 024	.0000
.52	.0000 195-	.0000 117	.0000 071	.0000 042	.0000
.53	.0000 322	.0000 198	.0000 121	.0000 074	.0000
.54	.0000 524	.0000 328	.0000 205-	.0000 127	.0000
.55	.0000 843	.0000 537	.0000 341	.0000 216	.0000
.56	.0001 339	.0000 869	.0000 561	.0000 362	.0000
.57	.0002 099	.0001 386	.0000 911	.0000 597	.0000
.58	.0003 252	.0002 184	.0001 461	.0000 974	.0000
.59	.0004 976	.0003 398	.0002 312	.0001 567	.0000
.60	.0007 526	.0005 224	.0003 613	.0002 490	.0001
.61	.0011 249	.0007 936	.0005 578	.0003 907	.0002
.62	.0016 623	.0011 914	.0008 508	.0006 054	.0004
.63	.0024 286	.0017 679	.0012 823	.0009 268	.0006
.64	.0035 085+	.0025 933	.0019 099	.0014 018	.0010
.65	.0050 126	.0037 610	.0028 118	.0020 951	.0015
.66	.0070 828	.0053 930	.0040 919	.0030 943	.0023
.67	.0098 987	.0076 468	.0058 866	.0045 165-	.0034
.68	.0136 834	.0107 215+	.0083 717	.0065 154	.0050
.69	.0187 097	.0148 653	.0117 706	.0092 898	.0073
.70	.0253 044	.0203 813	.0163 608	.0130 912	.0104
.71	.0338 506	.0276 324	.0224 817	.0182 331	.0147
.72	.0447 878	.0370 436	.0305 385+	.0250 972	.0205
.73	.0586 065-	.0491 003	.0410 042	.0341 380	.0283
.74	.0758 372	.0643 411	.0544 161	.0458 835+	.0385
.75	.0970 328	.0833 435+	.0713 655-	.0609 287	.0518
.76	.1227 421	.1067 016	.0924 791	.0799 214	.0688
.77	.1534 740	.1349 923	.1183 895+	.1035 374	.0903
.78	.1896 536	.1687 325+	.1496 944	.1324 424	.1168
.79	.2315 689	.2083 254	.1869 027	.1672 410	.1492
.80	.2793 139	.2539 986	.2303 710	.2084 112	.1880
.81	.3327 292	.3057 376	.2802 306	.2562 278	.2337
.82	.3913 482	.3632 212	.3363 131	.3106 791	.2863
.83	.4543 571	.4257 663	.3980 809	.3713 848	.3457
.84	.5205 759	.4922 928	.4645 755-	.4375 266	.4112
.85	.5884 729	.5613 206	.5343 945-	.5078 049	.4810
.86	.6584 729+				

TABLES OF THE INCOMPLETE β -FUNCTION

x .48 to 1.00

$q = 6.5$

$p =$

	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$(p, q) = .9915\ 5563 \times \frac{1}{10^8}$		$.8467\ 2166 \times \frac{1}{10^8}$	$.7257\ 6142 \times \frac{1}{10^8}$	$.6243\ 1090 \times \frac{1}{10^8}$	$.5388\ 7888 \times \frac{1}{10^8}$	$.4666\ 58$
x						
.48	.0000 001					
.49	.0000 001	.0000 001				
.50	.0000 002	.0000 001	.0000 001			
.51	.0000 005-	.0000 003	.0000 002	.0000 001	.0000 001	
.52	.0000 009	.0000 005+	.0000 003	.0000 002	.0000 001	.0000 00
.53	.0000 016	.0000 010	.0000 006	.0000 004	.0000 002	.0000 00
.54	.0000 030	.0000 018	.0000 011	.0000 007	.0000 004	.0000 00
.55	.0000 054	.0000 033	.0000 021	.0000 013	.0000 008	.0000 00
.56	.0000 095-	.0000 060	.0000 038	.0000 024	.0000 015+	.0000 01
.57	.0000 165-	.0000 107	.0000 069	.0000 044	.0000 028	.0000 01
.58	.0000 283	.0000 186	.0000 122	.0000 080	.0000 052	.0000 03
.59	.0000 479	.0000 320	.0000 214	.0000 142	.0000 095-	.0000 06
.60	.0000 799	.0000 544	.0000 369	.0000 250-	.0000 169	.0000 11
.61	.0001 316	.0000 911	.0000 628	.0000 432	.0000 297	.0000 20
.62	.0002 140	.0001 504	.0001 054	.0000 737	.0000 514	.0000 35
.63	.0003 433	.0002 451	.0001 745+	.0001 239	.0000 878	.0000 62
.64	.0005 438	.0003 943	.0002 851	.0002 056	.0001 479	.0001 06
.65	.0008 504	.0006 260	.0004 596	.0003 365-	.0002 458	.0001 79
.66	.0013 132	.0009 811	.0007 311	.0005 434	.0004 028	.0002 98
.67	.0020 024	.0015 181	.0011 479	.0008 658	.0006 514	.0004 88
.68	.0030 155-	.0023 193	.0017 791	.0013 613	.0010 391	.0007 91
.69	.0044 848	.0034 985-	.0027 219	.0021 124	.0016 355-	.0012 63
.70	.0065 874	.0052 105-	.0041 107	.0032 350-	.0025 398	.0019 89
.71	.0095 558	.0076 621	.0061 280	.0048 890	.0038 913	.0030 90
.72	.0136 891	.0111 243	.0090 172	.0072 914	.0058 822	.0047 34
.73	.0193 646	.0159 445+	.0130 958	.0107 303	.0087 718	.0071 54
.74	.0270 468	.0225 590	.0187 697	.0155 800	.0129 031	.0106 62
.75	.0372 936	.0315 015-	.0265 447	.0223 160	.0187 191	.0156 68
.76	.0507 561	.0434 077	.0370 354	.0315 265+	.0267 781	.0226 96
.77	.0681 685+	.0590 110	.0509 653	.0439 183	.0377 642	.0324 05
.78	.0903 261	.0791 255+	.0691 570	.0603 124	.0524 882	.0455 86
.79	.1180 458	.1046 134	.0925 052	.0816 246	.0718 758	.0631 65
.80	.1521 080	.1363 313	.1219 301	.1088 250+	.0969 345+	.0861 76
.81	.1931 780	.1750 551	.1583 053	.1428 725+	.1286 950+	.1157 07
.82	.2417 081	.2213 800	.2023 602	.1846 195-	.1681 206	.1528 19
.83	.2978 246	.2756 025+	.2545 571	.2346 875+	.2159 835+	.1984 26
.84	.3612 116	.3375 910	.3149 515-	.2933 194	.2727 110	.2531 32
.85	.4310 063	.4066 612	.3830 495+	.3602 200	.3382 118	.3170 55
.86	.5057 268	.4814 789	.4576 850-	.4344 086	.4117 055+	.3896 24
.87	.5832 598	.5600 183	.5369 468	.5141 145+	.4915 858	.4694 19
.88	.6609 322	.6396 058	.6181 918	.5967 564	.5753 629	.5540 71
.89	.7356 889	.7170 778	.6981 780	.6790 443	.6597 309	.6402 91
.90	.8043 817	.7890 668	.7733 396	.7572 388	.7408 043	.7240 76
.91	.8641 541	.8524 038	.8402 021	.8275 728	.8145 295-	.8011 76

$x = .53$ to 1.00 $q = 6.5$

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$
$B(p, q) = .4053\ 7968 \times \frac{1}{10^8}$	$.3532\ 0210 \times \frac{1}{10^8}$	$.3086\ 2319 \times \frac{1}{10^8}$	$.2704\ 1270 \times \frac{1}{10^8}$	$.2375\ 5882 \times \frac{1}{10^8}$	
x					
.53	.0000 001				
.54	.0000 002	.0000 001	.0000 001		
.55	.0000 003	.0000 002	.0000 001	.0000 001	
.56	.0000 006	.0000 004	.0000 002	.0000 001	.0000 001
.57	.0000 012	.0000 007	.0000 005	.0000 003	.0000 002
.58	.0000 022	.0000 014	.0000 009	.0000 006	.0000 004
.59	.0000 041	.0000 027	.0000 018	.0000 012	.0000 008
.60	.0000 076	.0000 051	.0000 034	.0000 023	.0000 015 ⁺
.61	.0000 139	.0000 094	.0000 064	.0000 044	.0000 030
.62	.0000 248	.0000 172	.0000 119	.0000 082	.0000 056
.63	.0000 437	.0000 308	.0000 216	.0000 151	.0000 106
.64	.0000 760	.0000 543	.0000 387	.0000 275 ⁺	.0000 196
.65	.0001 302	.0000 944	.0000 684	.0000 494	.0000 356
.66	.0002 199	.0001 619	.0001 190	.0000 872	.0000 638
.67	.0003 661	.0002 736	.0002 040	.0001 518	.0001 128
.68	.0006 012	.0004 558	.0003 449	.0002 604	.0001 963
.69	.0009 736	.0007 488	.0005 747	.0004 402	.0003 365 ⁻
.70	.0015 548	.0012 126	.0009 438	.0007 331	.0005 684
.71	.0024 487	.0019 362	.0015 279	.0012 034	.0009 460
.72	.0038 029	.0030 481	.0024 382	.0019 465 ⁺	.0015 511
.73	.0058 236	.0047 303	.0038 346	.0031 026	.0025 056
.74	.0087 928	.0072 361	.0059 433	.0048 723	.0039 870
.75	.0130 871	.0109 095 ⁻	.0090 766	.0075 376	.0062 483
.76	.0191 982	.0162 069	.0136 557	.0114 850 ⁻	.0096 421
.77	.0277 505 ⁺	.0237 187	.0202 347	.0172 312	.0146 480
.78	.0395 139	.0341 855 ⁻	.0295 214	.0254 484	.0218 997
.79	.0554 046	.0485 069	.0423 917	.0369 831	.0322 103
.80	.0764 692	.0677 326	.0598 892	.0528 641	.0465 865 ⁻
.81	.1038 419	.0930 295 ⁻	.0832 009	.0742 879	.0662 236
.82	.1386 684	.1256 138	.1136 006	.1025 719	.0924 702
.83	.1819 897	.1666 422	.1523 468	.1390 629	.1267 471
.84	.2345 838	.2170 550 ⁻	.2005 311	.1849 915 ⁻	.1704 107
.85	.2967 718	.2773 758	.2588 742	.2412 676	.2245 506
.86	.3682 051	.3474 823	.3274 825 ⁻	.3082 261	.2897 277
.87	.4476 675 ⁺	.4263 781	.4055 925 ⁻	.3853 469	.3656 720
.88	.5329 380	.5120 161	.4913 545 ⁺	.4709 984	.4509 888
.89	.6207 767	.6012 379	.5817 230	.5622 780	.5429 469
.90	.7070 953	.6899 022	.6725 371	.6550 398	.6374 496
.91	.7873 564	.7732 608	.7588 661	.7442 007	.7292 935 ⁺
.92	.8572 035 ⁻	.8466 003	.8356 532	.8243 776	.8127 902
.93	.9132 457	.9060 831	.8986 077	.8908 243	.8827 387
.94	.9538 260	.9496 159	.9451 747	.9405 008	.9355 933
.95	.9795 114	.9774 611	.9752 751	.9729 502	.9704 831
.96	.9930 219	.9922 598	.9914 388	.9905 564	.9896 101
.97	.9984 370	.9982 517	.9980 500 ⁻	.9978 309	.9975 935 ⁺
.98	.9998 372	.9998 163	.9997 934	.9997 682	.9997 407
.99	.9999 974	.9999 970	.9999 966	.9999 962	.9999 957
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$= .04 \text{ to } .60$

$q = 7$

$p =$

	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$(p, q) = .8325 \ 0083 \times \frac{1}{10^4}$		$.5834 \ 4212 \times \frac{1}{10^4}$	$.4162 \ 5042 \times \frac{1}{10^4}$	$.3017 \ 8041 \times \frac{1}{10^4}$	$.2220 \ 0022 \times \frac{1}{10^4}$	$.1654 \ 92$
x						
.04	.0000 002	.0000 001				
.05	.0000 010	.0000 003	.0000 001			
.06	.0000 035 ⁻	.0000 011	.0000 004	.0000 001		
.07	.0000 097	.0000 034	.0000 012	.0000 004	.0000 001	
.08	.0000 233	.0000 087	.0000 032	.0000 012	.0000 004	.0000 001
.09	.0000 503	.0000 200	.0000 078	.0000 030	.0000 012	.0000 004
.10	.0000 993	.0000 416	.0000 172	.0000 070	.0000 028	.0000 011
.11	.0001 827	.0000 802	.0000 348	.0000 149	.0000 063	.0000 027
.12	.0003 171	.0001 454	.0000 658	.0000 294	.0000 130	.0000 057
.13	.0005 239	.0002 498	.0001 176	.0000 548	.0000 252	.0000 111
.14	.0008 298	.0004 104	.0002 004	.0000 968	.0000 462	.0000 219
.15	.0012 675 ⁺	.0006 485 ⁻	.0003 276	.0001 637	.0000 809	.0000 399
.16	.0018 758	.0009 904	.0005 165 ⁺	.0002 663	.0001 359	.0000 688
.17	.0026 995 ⁻	.0014 682	.0007 887	.0004 190	.0002 203	.0001 141
.18	.0037 897	.0021 193	.0011 708	.0006 396	.0003 458	.0001 855
.19	.0052 035 ⁺	.0029 875 ⁻	.0016 945 ⁻	.0009 505 ⁻	.0005 277	.0002 901
.20	.0070 036	.0041 222	.0023 972	.0013 788	.0007 850 ⁻	.0004 428
.21	.0092 574	.0055 789	.0033 221	.0019 567	.0011 409	.0006 599
.22	.0120 368	.0074 185 ⁻	.0045 182	.0027 220	.0016 235 ⁺	.0009 599
.23	.0154 169	.0097 070	.0060 403	.0037 183	.0022 662	.0013 688
.24	.0194 752	.0125 150 ⁻	.0079 489	.0049 949	.0031 078	.0019 163
.25	.0242 901	.0159 165 ⁻	.0103 095 ⁺	.0066 071	.0041 930	.0026 369
.26	.0299 400	.0199 884	.0131 924	.0086 157	.0055 723	.0035 711
.27	.0365 018	.0248 092	.0166 717	.0110 869	.0073 020	.0047 663
.28	.0440 494	.0304 579	.0208 246	.0140 914	.0094 445 ⁻	.0062 741
.29	.0526 525 ⁻	.0370 124	.0257 302	.0177 045 ⁺	.0120 671	.0081 521
.30	.0623 752	.0445 486	.0314 685 ⁺	.0220 043	.0152 425 ⁺	.0104 669
.31	.0732 747	.0531 388	.0381 192	.0270 714	.0190 474	.0132 861
.32	.0853 996	.0628 501	.0457 600	.0329 874	.0235 618	.0166 866
.33	.0987 895 ⁺	.0737 433	.0544 656	.0398 339	.0288 685 ⁺	.0207 450
.34	.1134 732	.0858 713	.0643 058	.0476 909	.0350 512	.0255 462
.35	.1294 682	.0992 779	.0753 446	.0566 352	.0421 938	.0311 750
.36	.1467 798	.1139 967	.0876 380	.0667 393	.0503 786	.0377 177
.37	.1654 004	.1300 498	.1012 332	.0780 696	.0596 849	.0452 619
.38	.1853 096	.1474 471	.1161 672	.0906 848	.0701 875 ⁻	.0538 899
.39	.2064 732	.1661 855 ⁻	.1324 652	.1046 346	.0819 548	.0636 855
.40	.2288 440	.1862 481	.1501 401	.1199 579	.0950 474	.0747 241
.41	.2523 614	.2076 043	.1691 911	.1366 818	.1095 164	.0870 778
.42	.2769 524	.2302 092	.1896 034	.1548 205 ⁻	.1254 018	.1008 066
.43	.3025 317	.2540 040	.2113 473	.1743 737	.1427 310	.1159 621
.44	.3290 026	.2789 161	.2343 784	.1953 265 ⁺	.1615 177	.1325 852
.45	.3562 582	.3048 598	.2586 371	.2176 483	.1817 605 ⁻	.1507 007
.46	.3841 825 ⁻	.3317 369	.2840 492	.2412 926	.2034 419	.1703 202
.47	.4126 515 ⁺	.3594 375 ⁺	.3105 262	.2661 067	.2265 281	.1914 396
.48	.4415 240	.3878 418	.3370 660	.2922 821	.2500 681	.2142 361

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .61$ to $.98$ $q = 7$

	$p = 7$	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$
$B(p, q) = .8325\ 0083 \times \frac{1}{10^4}$	$.5834\ 4212 \times \frac{1}{10^4}$	$.4162\ 5042 \times \frac{1}{10^3}$	$.3017\ 8041 \times \frac{1}{10^3}$	$.2220\ 0000$	
$\cdot 61$	$\cdot 7935\ 268$	$\cdot 7573\ 837$	$\cdot 7195\ 189$	$\cdot 6804\ 056$	$\cdot 6405\ 181$
$\cdot 62$	$\cdot 8146\ 904$	$\cdot 7810\ 645^-$	$\cdot 7455\ 481$	$\cdot 7085\ 601$	$\cdot 6705\ 281$
$\cdot 63$	$\cdot 8345\ 996$	$\cdot 8035\ 218$	$\cdot 7704\ 324$	$\cdot 7356\ 941$	$\cdot 6996\ 881$
$\cdot 64$	$\cdot 8532\ 202$	$\cdot 8246\ 932$	$\cdot 7940\ 784$	$\cdot 7616\ 833$	$\cdot 7278\ 381$
$\cdot 65$	$\cdot 8705\ 318$	$\cdot 8445\ 303$	$\cdot 8164\ 081$	$\cdot 7864\ 181$	$\cdot 7548\ 421$
$\cdot 66$	$\cdot 8865\ 268$	$\cdot 8630\ 004$	$\cdot 8373\ 594$	$\cdot 8098\ 051$	$\cdot 7805\ 711$
$\cdot 67$	$\cdot 9012\ 105^-$	$\cdot 8800\ 851$	$\cdot 8568\ 865^+$	$\cdot 8317\ 682$	$\cdot 8049\ 181$
$\cdot 68$	$\cdot 9146\ 004$	$\cdot 8957\ 811$	$\cdot 8749\ 607$	$\cdot 8522\ 492$	$\cdot 8277\ 891$
$\cdot 69$	$\cdot 9267\ 253$	$\cdot 9100\ 992$	$\cdot 8915\ 699$	$\cdot 8712\ 089$	$\cdot 8491\ 191$
$\cdot 70$	$\cdot 9376\ 248$	$\cdot 9230\ 637$	$\cdot 9067\ 181$	$\cdot 8886\ 267$	$\cdot 8688\ 571$
$\cdot 71$	$\cdot 9473\ 475^+$	$\cdot 9347\ 113$	$\cdot 9204\ 253$	$\cdot 9045\ 004$	$\cdot 8869\ 721$
$\cdot 72$	$\cdot 9559\ 506$	$\cdot 9450\ 905^+$	$\cdot 9327\ 259$	$\cdot 9188\ 458$	$\cdot 9034\ 621$
$\cdot 73$	$\cdot 9634\ 982$	$\cdot 9542\ 596$	$\cdot 9436\ 682$	$\cdot 9316\ 960$	$\cdot 9183\ 331$
$\cdot 74$	$\cdot 9700\ 600$	$\cdot 9622\ 859$	$\cdot 9533\ 123$	$\cdot 9430\ 996$	$\cdot 9316\ 221$
$\cdot 75$	$\cdot 9757\ 099$	$\cdot 9692\ 436$	$\cdot 9617\ 292$	$\cdot 9531\ 193$	$\cdot 9433\ 701$
$\cdot 76$	$\cdot 9805\ 248$	$\cdot 9752\ 127$	$\cdot 9689\ 984$	$\cdot 9618\ 307$	$\cdot 9516\ 681$
$\cdot 77$	$\cdot 9845\ 831$	$\cdot 9802\ 770$	$\cdot 9752\ 064$	$\cdot 9693\ 194$	$\cdot 9625\ 711$
$\cdot 78$	$\cdot 9879\ 632$	$\cdot 9845\ 225^-$	$\cdot 9804\ 446$	$\cdot 9756\ 793$	$\cdot 9701\ 811$
$\cdot 79$	$\cdot 9907\ 426$	$\cdot 9880\ 359$	$\cdot 9848\ 073$	$\cdot 9810\ 104$	$\cdot 9766\ 011$
$\cdot 80$	$\cdot 9929\ 964$	$\cdot 9909\ 030$	$\cdot 9883\ 901$	$\cdot 9854\ 161$	$\cdot 9819\ 411$
$\cdot 81$	$\cdot 9947\ 965^-$	$\cdot 9932\ 071$	$\cdot 9912\ 874$	$\cdot 9890\ 013$	$\cdot 9863\ 131$
$\cdot 82$	$\cdot 9962\ 103$	$\cdot 9950\ 281$	$\cdot 9935\ 914$	$\cdot 9918\ 698$	$\cdot 9898\ 331$
$\cdot 83$	$\cdot 9973\ 005^+$	$\cdot 9964\ 409$	$\cdot 9953\ 898$	$\cdot 9941\ 226$	$\cdot 9926\ 141$
$\cdot 84$	$\cdot 9981\ 242$	$\cdot 9975\ 147$	$\cdot 9967\ 649$	$\cdot 9958\ 556$	$\cdot 9947\ 661$
$\cdot 85$	$\cdot 9987\ 325^-$	$\cdot 9983\ 124$	$\cdot 9977\ 925^+$	$\cdot 9971\ 583$	$\cdot 9963\ 941$
$\cdot 86$	$\cdot 9991\ 702$	$\cdot 9988\ 898$	$\cdot 9985\ 408$	$\cdot 9981\ 125^+$	$\cdot 9975\ 931$
$\cdot 87$	$\cdot 9994\ 761$	$\cdot 9992\ 958$	$\cdot 9990\ 699$	$\cdot 9987\ 912$	$\cdot 9984\ 511$
$\cdot 88$	$\cdot 9996\ 829$	$\cdot 9995\ 717$	$\cdot 9994\ 316$	$\cdot 9992\ 578$	$\cdot 9990\ 441$
$\cdot 89$	$\cdot 9998\ 173$	$\cdot 9997\ 520$	$\cdot 9996\ 694$	$\cdot 9995\ 662$	$\cdot 9994\ 331$
$\cdot 90$	$\cdot 9999\ 007$	$\cdot 9998\ 646$	$\cdot 9998\ 186$	$\cdot 9997\ 609$	$\cdot 9996\ 891$
$\cdot 91$	$\cdot 9999\ 497$	$\cdot 9999\ 311$	$\cdot 9999\ 073$	$\cdot 9998\ 773$	$\cdot 9998\ 331$
$\cdot 92$	$\cdot 9999\ 767$	$\cdot 9999\ 679$	$\cdot 9999\ 566$	$\cdot 9999\ 423$	$\cdot 9999\ 221$
$\cdot 93$	$\cdot 9999\ 903$	$\cdot 9999\ 866$	$\cdot 9999\ 818$	$\cdot 9999\ 757$	$\cdot 9999\ 681$
$\cdot 94$	$\cdot 9999\ 965^+$	$\cdot 9999\ 952$	$\cdot 9999\ 934$	$\cdot 9999\ 911$	$\cdot 9999\ 881$
$\cdot 95$	$\cdot 9999\ 990$	$\cdot 9999\ 986$	$\cdot 9999\ 980$	$\cdot 9999\ 974$	$\cdot 9999\ 991$
$\cdot 96$	$\cdot 9999\ 998$	$\cdot 9999\ 997$	$\cdot 9999\ 996$	$\cdot 9999\ 994$	$\cdot 9999\ 999$
$\cdot 97$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$\cdot 9999\ 999$	$\cdot 9999\ 999$	$\cdot 9999\ 999$
$\cdot 98$			$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

8 to 70

$q = 7$

$p = 10$

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$q) = .1248\ 7512 \times \frac{1}{10^4}$	$.9528\ 3550 \times \frac{1}{10^3}$	$.7345\ 5956 \times \frac{1}{10^3}$	$.4488\ 9751 \times \frac{1}{10^3}$	$.2835\ 1422 \times \frac{1}{10^3}$	$.1842\ 8424 \times \frac{1}{10^3}$	
8	.0000 001					
9	.0000 002	.0000 001				
0	.0000 005 ⁻	.0000 002	.0000 001			
1	.0000 011	.0000 005 ⁻	.0000 002			
2	.0000 025 ⁻	.0000 011	.0000 005 ⁻	.0000 001		
3	.0000 052	.0000 023	.0000 010	.0000 002		
4	.0000 103	.0000 048	.0000 022	.0000 005 ⁻	.0000 001	
5	.0000 192	.0000 093	.0000 044	.0000 010	.0000 002	
6	.0000 344	.0000 171	.0000 084	.0000 020	.0000 005 ⁻	.0000 001
7	.0000 592	.0000 303	.0000 154	.0000 039	.0000 010	.0000 002
8	.0000 983	.0000 518	.0000 271	.0000 072	.0000 019	.0000 005 ⁻
9	.0001 583	.0000 856	.0000 460	.0000 130	.0000 036	.0000 010
0	.0002 476	.0001 373	.0000 756	.0000 225 ⁻	.0000 065 ⁺	.0000 018
1	.0003 774	.0002 144	.0001 209	.0000 377	.0000 115 ⁻	.0000 034
2	.0005 621	.0003 267	.0001 885 ⁺	.0000 615 ⁻	.0000 196	.0000 061
3	.0008 195 ⁻	.0004 868	.0002 871	.0000 978	.0000 325 ⁺	.0000 106
4	.0011 714	.0007 105 ⁺	.0004 278	.0001 520	.0000 527	.0000 179
5	.0016 445 ⁻	.0010 175 ⁺	.0006 250 ⁺	.0002 312	.0000 835 ⁻	.0000 295 ⁺
6	.0022 702	.0014 318	.0008 965 ⁺	.0003 446	.0001 293	.0000 475 ⁺
7	.0030 857	.0019 822	.0012 642	.0005 042	.0001 963	.0000 749
8	.0041 338	.0027 028	.0017 546	.0007 250 ⁺	.0002 926	.0001 156
9	.0054 633	.0036 333	.0023 992	.0010 259	.0004 285 ⁻	.0001 753
0	.0071 295 ⁺	.0048 197	.0032 353	.0014 298	.0006 173	.0002 610
1	.0091 936	.0063 140	.0043 061	.0019 646	.0008 757	.0003 824
2	.0117 228	.0081 749	.0056 612	.0026 635 ⁻	.0012 246	.0005 516
3	.0147 901	.0104 671	.0073 567	.0035 657	.0016 891	.0007 840
4	.0184 736	.0132 618	.0094 554	.0047 167	.0023 000	.0010 991
5	.0228 559	.0166 359	.0120 267	.0061 690	.0030 938	.0015 207
6	.0280 230	.0206 714	.0151 462	.0079 820	.0041 133	.0020 778
7	.0340 635 ⁺	.0254 549	.0188 956	.0102 223	.0054 087	.0028 056
8	.0410 670	.0310 765 ⁻	.0233 618	.0129 640	.0070 372	.0037 456
9	.0491 230	.0376 284	.0286 360	.0162 879	.0090 643	.0049 468
0	.0583 189	.0452 038	.0348 127	.0202 816	.0115 629	.0064 659
1	.0687 387	.0538 953	.0419 885 ⁺	.0250 386	.0146 145 ⁻	.0083 680
2	.0804 607	.0637 929	.0502 603	.0306 575 ⁻	.0183 077	.0107 269
3	.0935 561	.0749 825 ⁻	.0597 237	.0372 405 ⁺	.0227 389	.0136 252
4	.1080 866	.0875 435 ⁻	.0704 711	.0448 925 ⁺	.0280 107	.0171 544
5	.1241 030	.1015 471	.0825 896	.0537 190	.0342 313	.0214 144
6	.1416 430	.1170 540	.0961 590	.0638 240	.0415 129	.0265 129
7	.1607 297	.1341 126	.1112 492	.0753 084	.0499 701	.0325 647
8	.1813 698	.1527 568	.1279 183	.0882 670	.0597 181	.0396 899
9	.2035 528	.1730 044	.1462 103	.1027 865 ⁻	.0708 699	.0480 128
0	.2272 491	.1948 550 ⁻	.1661 530	.1189 423	.0835 342	.0576 591
1	.2524 102	.2182 892	.1877 557	.1367 062	.0988 100	.0690 100

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.99$ $q = 7$

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$B(p, q) = .1248 \ 7512 \times \frac{x}{100}$	$.9528 \ 3550 \times \frac{x}{100}$	$.7345 \ 5956 \times \frac{x}{100}$	$.4488 \ 9751 \times \frac{x}{100}$	$.2835 \ 1422 \times \frac{x}{100}$	
.71	.8473 907	.8255 220	.8024 238	.7530 828	.7005 346
.72	.8683 469	.8487 440	.8278 935 ⁻	.7828 799	.7342 651
.73	.8875 136	.8701 311	.8515 139	.8108 997	.7664 271
.74	.9048 755 ⁻	.8896 372	.8732 050 ⁻	.8369 855 ⁻	.7967 818
.75	.9204 427	.9072 456	.8929 184	.8610 152	.8251 241
.76	.9342 504	.9229 681	.9106 381	.8829 043	.8512 879
.77	.9463 564	.9368 439	.9263 796	.9026 072	.8751 501
.78	.9568 399	.9489 380	.9401 893	.9201 178	.8966 342
.79	.9657 978	.9593 388	.9521 416	.9354 686	.9157 112
.80	.9733 427	.9681 543	.9623 366	.9487 290	.9323 999
.81	.9795 984	.9755 094	.9708 958	.9600 017	.9467 654
.82	.9846 971	.9815 412	.9779 585 ⁻	.9694 188	.9589 151
.83	.9887 751	.9863 950 ⁺	.9836 765 ⁺	.9771 365 ⁻	.9689 941
.84	.9919 693	.9902 199	.9882 096	.9833 288	.9771 790
.85	.9944 137	.9931 643	.9917 200	.9881 815 ⁻	.9836 698
.86	.9962 360	.9953 722	.9943 679	.9918 850 ⁻	.9886 820
.87	.9975 547	.9969 793	.9963 064	.9946 280	.9924 377
.88	.9984 771	.9981 099	.9976 779	.9965 911	.9951 565 ⁺
.89	.9990 973	.9988 744	.9986 107	.9979 414	.9970 479
.90	.9994 955 ⁻	.9993 679	.9992 162	.9988 279	.9983 036
.91	.9997 373	.9996 694	.9995 882	.9993 784	.9990 921
.92	.9998 747	.9998 416	.9998 018	.9996 981	.9995 549
.93	.9999 465 ⁺	.9999 321	.9999 146	.9998 687	.9998 047
.94	.9999 803	.9999 748	.9999 682	.9999 506	.9999 259
.95	.9999 940	.9999 923	.9999 903	.9999 848	.9999 769
.96	.9999 986	.9999 982	.9999 978	.9999 965 ⁻	.9999 946
.97	.9999 998	.9999 997	.9999 997	.9999 995 ⁻	.9999 992
.98	I.0000 000	I.0000 000	I.0000 000	I.0000 000	.9999 999
.99					I.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

7 to 80

$q = 7$

$p = 15$

$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$q = .1228\ 5616 \times \frac{1}{10^8}$	$.8376\ 5564 \times \frac{1}{10^8}$	$.5827\ 1696 \times \frac{1}{10^8}$	$.4127\ 5785 \times \frac{1}{10^8}$	$.2971\ 8565 \times \frac{1}{10^8}$	$.2171\ 7413 \times \frac{1}{10^8}$
.0000 001					
.0000 001					
.0000 003	.0000 001				
.0000 005 ⁺	.0000 001				
.0000 010	.0000 003	.0000 001			
.0000 019	.0000 006	.0000 002			
.0000 034	.0000 011	.0000 003	.0000 001		
.0000 060	.0000 020	.0000 006	.0000 002	.0000 001	
.0000 102	.0000 035 ⁻	.0000 012	.0000 004	.0000 001	
.0000 171	.0000 061	.0000 021	.0000 007	.0000 002	.0000 001
.0000 280	.0000 103	.0000 037	.0000 013	.0000 005 ⁻	.0000 002
.0000 449	.0000 171	.0000 064	.0000 024	.0000 009	.0000 003
.0000 704	.0000 278	.0000 108	.0000 041	.0000 016	.0000 006
.0001 084	.0000 442	.0000 178	.0000 071	.0000 028	.0000 011
.0001 640	.0000 691	.0000 287	.0000 118	.0000 048	.0000 019
.0002 440	.0001 061	.0000 455 ⁻	.0000 192	.0000 080	.0000 033
.0003 574	.0001 602	.0000 708	.0000 309	.0000 133	.0000 057
.0005 158	.0002 381	.0001 083	.0000 486	.0000 216	.0000 095 ⁻
.0007 341	.0003 487	.0001 632	.0000 754	.0000 344	.0000 155 ⁺
.0010 310	.0005 034	.0002 422	.0001 150 ⁺	.0000 540	.0000 250 ⁺
.0014 297	.0007 169	.0003 544	.0001 728	.0000 833	.0000 397
.0019 587	.0010 081	.0005 114	.0002 560	.0001 267	.0000 620
.0026 528	.0014 002	.0007 286	.0003 742	.0001 899	.0000 953
.0035 533	.0019 222	.0010 251	.0005 396	.0002 807	.0001 444
.0047 093	.0026 092	.0014 253	.0007 686	.0004 096	.0002 159
.0061 783	.0035 038	.0019 593	.0010 816	.0005 901	.0003 185 ⁺
.0080 267	.0046 565 ⁻	.0026 638	.0015 046	.0008 399	.0004 639
.0103 304	.0061 268	.0035 837	.0020 697	.0011 816	.0006 674
.0131 749	.0079 841	.0047 722	.0028 168	.0016 435 ⁺	.0009 488
.0166 558	.0103 078	.0062 927	.0037 939	.0022 613	.0013 337
.0208 782	.0131 885 ⁻	.0082 190	.0050 590	.0030 787	.0018 540
.0259 563	.0167 274	.0106 362	.0066 806	.0041 490	.0025 500 ⁺
.0320 128	.0210 368	.0136 417	.0087 392	.0055 362	.0034 712
.0391 769	.0262 394	.0173 448	.0113 279	.0073 166	.0046 777
.0475 833	.0324 673	.0218 672	.0145 532	.0095 796	.0062 421
.0573 695 ⁻	.0398 609	.0273 423	.0185 350 ⁺	.0124 287	.0082 507
.0686 729	.0485 665 ⁻	.0339 139	.0234 072	.0159 824	.0108 046
.0816 284	.0587 343	.0417 355 ⁻	.0293 163	.0203 745 ⁺	.0140 211
.0963 640	.0705 152	.0509 671	.0364 210	.0257 538	.0180 342
.1129 972	.0840 571	.0617 731	.0448 898	.0322 836	.0229 948
.1316 309	.0995 007	.0743 186	.0548 988	.0401 397	.0290 704
.1523 485 ⁻	.1169 751	.0887 648	.0666 280	.0495 089	.0364 443
.1752 097	.1365 926	.1052 646	.0802 574	.0605 851	.0453 132
.2002 460	.1584 437	.1239 567	.0950 615 ⁻	.0735 652	.0558 810

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.99$ $q = 7$

	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$B(p, q) = .1228\ 5616 \times \frac{x}{10^8}$		$.8376\ 5564 \times \frac{x}{10^8}$	$.5827\ 1696 \times \frac{x}{10^8}$	$.4127\ 5785 \times \frac{x}{10^8}$	$.2971\ 1696 \times \frac{x}{10^8}$
x					
.81	.9129 635 ⁻	.8924 016	.8695 009	.8444 043	.8173 000
.82	.9315 803	.9146 515 ⁻	.8955 642	.8743 886	.8512 000
.83	.9474 051	.9337 961	.9182 649	.9008 242	.8815 000
.84	.9605 688	.9499 141	.9376 079	.9236 223	.9079 000
.85	.9712 590	.9631 599	.9536 941	.9428 085 ⁻	.9304 000
.86	.9797 101	.9737 551	.9607 132	.9585 199	.9491 000
.87	.9861 912	.9819 751	.9769 317	.9709 953	.9641 000
.88	.9909 918	.9881 341	.9846 762	.9805 594	.9757 000
.89	.9944 079	.9925 667	.9903 135 ⁻	.9876 003	.9843 000
.90	.9967 272	.9956 100	.9942 274	.9925 439	.9905 000
.91	.9982 162	.9975 855 ⁻	.9967 963	.9958 247	.9946 000
.92	.9991 095 ⁻	.9987 837	.9983 715 ⁺	.9978 585 ⁺	.9972 000
.93	.9996 022	.9994 517	.9992 593	.9990 172	.9987 000
.94	.9998 463	.9997 863	.9997 086	.9996 099	.9994 000
.95	.9999 513	.9999 316	.9999 060	.9998 730	.9998 000
.96	.9999 884	.9999 836	.9999 772	.9999 690	.9999 000
.97	.9999 982	.9999 975 ⁻	.9999 965 ⁻	.9999 952	.9999 000
.98	.9999 999	.9999 998	.9999 998	.9999 997	.9999 000
.99	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$\cdot 27$ to $\cdot 90$		$q = 7$				$p = 2$
$p = 21$		$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$(p, q) = \cdot 1608\ 6973 \times \frac{1}{10^8}$		$\cdot 1206\ 5229 \times \frac{1}{10^8}$	$\cdot 9152\ 9327 \times \frac{1}{10^8}$	$\cdot 7017\ 2484 \times \frac{1}{10^8}$	$\cdot 5432\ 7084 \times \frac{1}{10^8}$	$\cdot 4244\ 3903 \times \frac{1}{10^8}$
$\cdot 27$	$\cdot 0000\ 001$					
$\cdot 28$	$\cdot 0000\ 001$					
$\cdot 29$	$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 30$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 31$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$			
$\cdot 32$	$\cdot 0000\ 014$	$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 33$	$\cdot 0000\ 024$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 34$	$\cdot 0000\ 041$	$\cdot 0000\ 018$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 35$	$\cdot 0000\ 069$	$\cdot 0000\ 031$	$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 36$	$\cdot 0000\ 115^-$	$\cdot 0000\ 052$	$\cdot 0000\ 024$	$\cdot 0000\ 011$	$\cdot 0000\ 005^-$	$\cdot 0000\ 002$
$\cdot 37$	$\cdot 0000\ 187$	$\cdot 0000\ 088$	$\cdot 0000\ 041$	$\cdot 0000\ 019$	$\cdot 0000\ 009$	$\cdot 0000\ 002$
$\cdot 38$	$\cdot 0000\ 300$	$\cdot 0000\ 144$	$\cdot 0000\ 069$	$\cdot 0000\ 032$	$\cdot 0000\ 015^+$	$\cdot 0000\ 004$
$\cdot 39$	$\cdot 0000\ 474$	$\cdot 0000\ 233$	$\cdot 0000\ 114$	$\cdot 0000\ 055^+$	$\cdot 0000\ 026$	$\cdot 0000\ 011$
$\cdot 40$	$\cdot 0000\ 736$	$\cdot 0000\ 371$	$\cdot 0000\ 186$	$\cdot 0000\ 092$	$\cdot 0000\ 045^+$	$\cdot 0000\ 021$
$\cdot 41$	$\cdot 0001\ 127$	$\cdot 0000\ 583$	$\cdot 0000\ 299$	$\cdot 0000\ 152$	$\cdot 0000\ 077$	$\cdot 0000\ 031$
$\cdot 42$	$\cdot 0001\ 702$	$\cdot 0000\ 901$	$\cdot 0000\ 473$	$\cdot 0000\ 246$	$\cdot 0000\ 127$	$\cdot 0000\ 061$
$\cdot 43$	$\cdot 0002\ 537$	$\cdot 0001\ 374$	$\cdot 0000\ 738$	$\cdot 0000\ 394$	$\cdot 0000\ 208$	$\cdot 0000\ 101$
$\cdot 44$	$\cdot 0003\ 732$	$\cdot 0002\ 068$	$\cdot 0001\ 137$	$\cdot 0000\ 620$	$\cdot 0000\ 335^+$	$\cdot 0000\ 181$
$\cdot 45$	$\cdot 0005\ 424$	$\cdot 0003\ 073$	$\cdot 0001\ 726$	$\cdot 0000\ 962$	$\cdot 0000\ 532$	$\cdot 0000\ 291$
$\cdot 46$	$\cdot 0007\ 790$	$\cdot 0004\ 509$	$\cdot 0002\ 588$	$\cdot 0001\ 474$	$\cdot 0000\ 833$	$\cdot 0000\ 461$
$\cdot 47$	$\cdot 0011\ 058$	$\cdot 0006\ 536$	$\cdot 0003\ 832$	$\cdot 0002\ 229$	$\cdot 0001\ 287$	$\cdot 0000\ 731$
$\cdot 48$	$\cdot 0015\ 523$	$\cdot 0009\ 366$	$\cdot 0005\ 604$	$\cdot 0003\ 328$	$\cdot 0001\ 962$	$\cdot 0001\ 141$
$\cdot 49$	$\cdot 0021\ 557$	$\cdot 0013\ 270$	$\cdot 0008\ 101$	$\cdot 0004\ 908$	$\cdot 0002\ 953$	$\cdot 0001\ 761$
$\cdot 50$	$\cdot 0029\ 623$	$\cdot 0018\ 596$	$\cdot 0011\ 578$	$\cdot 0007\ 155^-$	$\cdot 0004\ 390$	$\cdot 0002\ 671$
$\cdot 51$	$\cdot 0040\ 293$	$\cdot 0025\ 784$	$\cdot 0016\ 366$	$\cdot 0010\ 309$	$\cdot 0006\ 449$	$\cdot 0004\ 001$
$\cdot 52$	$\cdot 0054\ 263$	$\cdot 0035\ 381$	$\cdot 0022\ 884$	$\cdot 0014\ 690$	$\cdot 0009\ 364$	$\cdot 0005\ 931$
$\cdot 53$	$\cdot 0072\ 371$	$\cdot 0048\ 061$	$\cdot 0031\ 663$	$\cdot 0020\ 705^-$	$\cdot 0013\ 445^-$	$\cdot 0008\ 671$
$\cdot 54$	$\cdot 0095\ 611$	$\cdot 0064\ 645^-$	$\cdot 0043\ 363$	$\cdot 0028\ 873$	$\cdot 0019\ 092$	$\cdot 0012\ 541$
$\cdot 55$	$\cdot 0125\ 146$	$\cdot 0086\ 115^+$	$\cdot 0058\ 794$	$\cdot 0039\ 847$	$\cdot 0026\ 820$	$\cdot 0017\ 931$
$\cdot 56$	$\cdot 0162\ 325^+$	$\cdot 0113\ 637$	$\cdot 0078\ 935^+$	$\cdot 0054\ 433$	$\cdot 0037\ 282$	$\cdot 0025\ 371$
$\cdot 57$	$\cdot 0208\ 681$	$\cdot 0148\ 569$	$\cdot 0104\ 961$	$\cdot 0073\ 620$	$\cdot 0051\ 290$	$\cdot 0035\ 501$
$\cdot 58$	$\cdot 0265\ 936$	$\cdot 0192\ 478$	$\cdot 0138\ 253$	$\cdot 0098\ 598$	$\cdot 0069\ 848$	$\cdot 0049\ 171$
$\cdot 59$	$\cdot 0335\ 996$	$\cdot 0247\ 140$	$\cdot 0180\ 418$	$\cdot 0130\ 782$	$\cdot 0094\ 175^+$	$\cdot 0067\ 391$
$\cdot 60$	$\cdot 0420\ 927$	$\cdot 0314\ 536$	$\cdot 0233\ 293$	$\cdot 0171\ 830$	$\cdot 0125\ 733$	$\cdot 0091\ 431$
$\cdot 61$	$\cdot 0522\ 933$	$\cdot 0396\ 841$	$\cdot 0298\ 949$	$\cdot 0223\ 656$	$\cdot 0166\ 246$	$\cdot 0122\ 821$
$\cdot 62$	$\cdot 0644\ 311$	$\cdot 0496\ 395^-$	$\cdot 0379\ 675^-$	$\cdot 0288\ 431$	$\cdot 0217\ 716$	$\cdot 0163\ 351$
$\cdot 63$	$\cdot 0787\ 400$	$\cdot 0615\ 661$	$\cdot 0477\ 957$	$\cdot 0368\ 572$	$\cdot 0282\ 432$	$\cdot 0215\ 131$
$\cdot 64$	$\cdot 0954\ 508$	$\cdot 0757\ 173$	$\cdot 0596\ 435^+$	$\cdot 0466\ 727$	$\cdot 0362\ 960$	$\cdot 0280\ 611$
$\cdot 65$	$\cdot 1147\ 828$	$\cdot 0923\ 459$	$\cdot 0737\ 844$	$\cdot 0585\ 721$	$\cdot 0462\ 121$	$\cdot 0362\ 491$
$\cdot 66$	$\cdot 1369\ 343$	$\cdot 1116\ 948$	$\cdot 0904\ 935^+$	$\cdot 0728\ 504$	$\cdot 0582\ 949$	$\cdot 0463\ 821$
$\cdot 67$	$\cdot 1620\ 715^-$	$\cdot 1339\ 865^-$	$\cdot 1100\ 376$	$\cdot 0898\ 060$	$\cdot 0728\ 620$	$\cdot 0587\ 851$
$\cdot 68$	$\cdot 1903\ 167$	$\cdot 1594\ 106$	$\cdot 1326\ 629$	$\cdot 1097\ 296$	$\cdot 0902\ 362$	$\cdot 0737\ 991$
$\cdot 69$	$\cdot 2217\ 362$	$\cdot 1881\ 107$	$\cdot 1585\ 814$	$\cdot 1328\ 909$	$\cdot 1107\ 328$	$\cdot 0917\ 741$
$\cdot 70$	$\cdot 2563\ 285^+$	$\cdot 2201\ 697$	$\cdot 1879\ 555^+$	$\cdot 1595\ 230$	$\cdot 1346\ 445^+$	$\cdot 1130\ 501$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = \cdot 91$ to $\cdot 99$ $q = 7$

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	p
$B(p, q) = \cdot 1608\ 6973 \times \frac{x}{10^7}$	$\cdot 1206\ 5229 \times \frac{x}{10^6}$	$\cdot 9152\ 9327 \times \frac{x}{10^7}$	$\cdot 7017\ 2484 \times \frac{x}{10^7}$	$\cdot 543$	
x					
$\cdot 91$	$\cdot 9915\ 644$	$\cdot 9896\ 106$	$\cdot 9873\ 478$	$\cdot 9847\ 514$	$\cdot 98$
$\cdot 92$	$\cdot 9955\ 564$	$\cdot 9944\ 788$	$\cdot 9932\ 170$	$\cdot 9917\ 532$	$\cdot 99$
$\cdot 93$	$\cdot 9979\ 055^+$	$\cdot 9973\ 745^-$	$\cdot 9967\ 459$	$\cdot 9960\ 088$	$\cdot 99$
$\cdot 94$	$\cdot 9991\ 463$	$\cdot 9989\ 203$	$\cdot 9986\ 499$	$\cdot 9983\ 295^+$	$\cdot 99$
$\cdot 95$	$\cdot 9997\ 146$	$\cdot 9996\ 358$	$\cdot 9995\ 406$	$\cdot 9994\ 265^+$	$\cdot 99$
$\cdot 96$	$\cdot 9999\ 284$	$\cdot 9999\ 078$	$\cdot 9998\ 826$	$\cdot 9998\ 522$	$\cdot 99$
$\cdot 97$	$\cdot 9999\ 886$	$\cdot 9999\ 852$	$\cdot 9999\ 809$	$\cdot 9999\ 758$	$\cdot 99$
$\cdot 98$	$\cdot 9999\ 992$	$\cdot 9999\ 990$	$\cdot 9999\ 986$	$\cdot 9999\ 983$	$\cdot 99$
$\cdot 99$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 000$

TABLES OF THE INCOMPLETE β -FUNCTION

β to 1.00

$q = 7$

$p = 2$

	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$p, q) =$	$\cdot 3343\ 9967 \times \frac{1}{10^7}$	$\cdot 2655\ 5268 \times \frac{1}{10^7}$	$\cdot 2124\ 4214 \times \frac{1}{10^7}$	$\cdot 1711\ 3395 \times \frac{1}{10^7}$	$\cdot 1387\ 5725 \times \frac{1}{10^7}$	$\cdot 1131\ 9671 \times \frac{1}{10^7}$
β	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 011$	$\cdot 0000\ 005^+$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 019$	$\cdot 0000\ 009$	$\cdot 0000\ 005^-$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
β	$\cdot 0000\ 033$	$\cdot 0000\ 017$	$\cdot 0000\ 009$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
β	$\cdot 0000\ 057$	$\cdot 0000\ 030$	$\cdot 0000\ 015^+$	$\cdot 0000\ 008$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
β	$\cdot 0000\ 096$	$\cdot 0000\ 051$	$\cdot 0000\ 027$	$\cdot 0000\ 014$	$\cdot 0000\ 007$	$\cdot 0000\ 004$
β	$\cdot 0000\ 160$	$\cdot 0000\ 087$	$\cdot 0000\ 047$	$\cdot 0000\ 025^+$	$\cdot 0000\ 013$	$\cdot 0000\ 007$
β	$\cdot 0000\ 261$	$\cdot 0000\ 145^-$	$\cdot 0000\ 080$	$\cdot 0000\ 044$	$\cdot 0000\ 024$	$\cdot 0000\ 013$
β	$\cdot 0000\ 421$	$\cdot 0000\ 238$	$\cdot 0000\ 134$	$\cdot 0000\ 075^+$	$\cdot 0000\ 042$	$\cdot 0000\ 023$
β	$\cdot 0000\ 668$	$\cdot 0000\ 387$	$\cdot 0000\ 222$	$\cdot 0000\ 127$	$\cdot 0000\ 072$	$\cdot 0000\ 041$
β	$\cdot 0001\ 048$	$\cdot 0000\ 618$	$\cdot 0000\ 363$	$\cdot 0000\ 212$	$\cdot 0000\ 123$	$\cdot 0000\ 071$
β	$\cdot 0001\ 620$	$\cdot 0000\ 976$	$\cdot 0000\ 584$	$\cdot 0000\ 348$	$\cdot 0000\ 206$	$\cdot 0000\ 122$
β	$\cdot 0002\ 474$	$\cdot 0001\ 519$	$\cdot 0000\ 928$	$\cdot 0000\ 563$	$\cdot 0000\ 341$	$\cdot 0000\ 205^-$
β	$\cdot 0003\ 732$	$\cdot 0002\ 335^+$	$\cdot 0001\ 453$	$\cdot 0000\ 900$	$\cdot 0000\ 554$	$\cdot 0000\ 340$
β	$\cdot 0005\ 561$	$\cdot 0003\ 545^+$	$\cdot 0002\ 248$	$\cdot 0001\ 418$	$\cdot 0000\ 890$	$\cdot 0000\ 556$
β	$\cdot 0008\ 190$	$\cdot 0005\ 317$	$\cdot 0003\ 434$	$\cdot 0002\ 206$	$\cdot 0001\ 410$	$\cdot 0000\ 808$
β	$\cdot 0011\ 923$	$\cdot 0007\ 881$	$\cdot 0005\ 181$	$\cdot 0003\ 389$	$\cdot 0002\ 206$	$\cdot 0001\ 429$
β	$\cdot 0017\ 163$	$\cdot 0011\ 544$	$\cdot 0007\ 724$	$\cdot 0005\ 142$	$\cdot 0003\ 406$	$\cdot 0002\ 247$
β	$\cdot 0024\ 434$	$\cdot 0016\ 720$	$\cdot 0011\ 381$	$\cdot 0007\ 708$	$\cdot 0005\ 196$	$\cdot 0003\ 487$
β	$\cdot 0034\ 410$	$\cdot 0023\ 947$	$\cdot 0016\ 578$	$\cdot 0011\ 419$	$\cdot 0007\ 829$	$\cdot 0005\ 344$
β	$\cdot 0047\ 947$	$\cdot 0033\ 923$	$\cdot 0023\ 876$	$\cdot 0016\ 722$	$\cdot 0011\ 657$	$\cdot 0008\ 090$
β	$\cdot 0066\ 111$	$\cdot 0047\ 538$	$\cdot 0034\ 007$	$\cdot 0024\ 208$	$\cdot 0017\ 153$	$\cdot 0012\ 101$
β	$\cdot 0090\ 218$	$\cdot 0065\ 912$	$\cdot 0047\ 907$	$\cdot 0034\ 652$	$\cdot 0024\ 950^-$	$\cdot 0017\ 885^+$
β	$\cdot 0121\ 866$	$\cdot 0090\ 430$	$\cdot 0066\ 763$	$\cdot 0049\ 053$	$\cdot 0035\ 878$	$\cdot 0026\ 127$
β	$\cdot 0162\ 961$	$\cdot 0122\ 784$	$\cdot 0092\ 049$	$\cdot 0068\ 679$	$\cdot 0051\ 012$	$\cdot 0037\ 727$
β	$\cdot 0215\ 744$	$\cdot 0165\ 005^-$	$\cdot 0125\ 573$	$\cdot 0095\ 115^+$	$\cdot 0071\ 724$	$\cdot 0053\ 855^+$
β	$\cdot 0282\ 802$	$\cdot 0219\ 487$	$\cdot 0169\ 513$	$\cdot 0130\ 310$	$\cdot 0099\ 731$	$\cdot 0076\ 008$
β	$\cdot 0367\ 062$	$\cdot 0289\ 006$	$\cdot 0226\ 449$	$\cdot 0176\ 619$	$\cdot 0137\ 154$	$\cdot 0106\ 066$
β	$\cdot 0471\ 769$	$\cdot 0376\ 711$	$\cdot 0299\ 375^-$	$\cdot 0236\ 839$	$\cdot 0186\ 560$	$\cdot 0146\ 353$
β	$\cdot 0600\ 432$	$\cdot 0486\ 102$	$\cdot 0391\ 697$	$\cdot 0314\ 221$	$\cdot 0251\ 000$	$\cdot 0199\ 689$
β	$\cdot 0756\ 743$	$\cdot 0620\ 965^+$	$\cdot 0507\ 203$	$\cdot 0412\ 467$	$\cdot 0334\ 025^-$	$\cdot 0269\ 424$
β	$\cdot 0944\ 455^+$	$\cdot 0785\ 283$	$\cdot 0649\ 987$	$\cdot 0535\ 685^+$	$\cdot 0439\ 672$	$\cdot 0359\ 454$
β	$\cdot 1167\ 226$	$\cdot 0983\ 093$	$\cdot 0824\ 344$	$\cdot 0688\ 312$	$\cdot 0572\ 414$	$\cdot 0474\ 199$
β	$\cdot 1428\ 417$	$\cdot 1218\ 304$	$\cdot 1034\ 604$	$\cdot 0874\ 976$	$\cdot 0737\ 057$	$\cdot 0618\ 536$
β	$\cdot 1730\ 859$	$\cdot 1494\ 467$	$\cdot 1284\ 921$	$\cdot 1100\ 305^-$	$\cdot 0938\ 581$	$\cdot 0797\ 672$
β	$\cdot 2076\ 585^-$	$\cdot 1814\ 501$	$\cdot 1579\ 000$	$\cdot 1368\ 673$	$\cdot 1181\ 903$	$\cdot 1016\ 943$
β	$\cdot 2466\ 545^+$	$\cdot 2180\ 388$	$\cdot 1919\ 781$	$\cdot 1683\ 886$	$\cdot 1471\ 581$	$\cdot 1281\ 534$
β	$\cdot 2900\ 323$	$\cdot 2592\ 843$	$\cdot 2309\ 084$	$\cdot 2048\ 808$	$\cdot 1811\ 436$	$\cdot 1596\ 117$
β	$\cdot 3375\ 867$	$\cdot 3050\ 993$	$\cdot 2747\ 236$	$\cdot 2464\ 951$	$\cdot 2204\ 120$	$\cdot 1964\ 408$
β	$\cdot 3889\ 279$	$\cdot 3552\ 083$	$\cdot 3232\ 709$	$\cdot 2932\ 057$	$\cdot 2650\ 647$	$\cdot 2388\ 664$
β	$\cdot 4434\ 678$	$\cdot 4091\ 249$	$\cdot 3761\ 802$	$\cdot 3447\ 692$	$\cdot 3149\ 016$	$\cdot 2860\ 111$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .42$ to 1.00 $q = 7$

	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$
$B(p, q) = .9287\ 9350 \times \frac{x}{108}$		$.7662\ 5464 \times \frac{x}{108}$	$.6354\ 3067 \times \frac{x}{108}$	$.5295\ 2556 \times \frac{x}{108}$	$.4433\ 237$
x					
.42	.0000 001				
.43	.0000 001	.0000 001			
.44	.0000 002	.0000 001	.0000 001		
.45	.0000 004	.0000 002	.0000 001	.0000 001	
.46	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001
.47	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
.48	.0000 023	.0000 013	.0000 007	.0000 004	.0000 002
.49	.0000 041	.0000 024	.0000 013	.0000 008	.0000 004
.50	.0000 071	.0000 042	.0000 024	.0000 014	.0000 008
.51	.0000 123	.0000 073	.0000 044	.0000 026	.0000 015
.52	.0000 208	.0000 126	.0000 076	.0000 046	.0000 028
.53	.0000 346	.0000 214	.0000 132	.0000 081	.0000 050
.54	.0000 569	.0000 359	.0000 226	.0000 141	.0000 088
.55	.0000 922	.0000 593	.0000 379	.0000 242	.0000 154
.56	.0001 475 ⁺	.0000 965 ⁺	.0000 629	.0000 408	.0000 264
.57	.0002 330	.0001 550 ⁺	.0001 028	.0000 679	.0000 447
.58	.0003 632	.0002 459	.0001 658	.0001 114	.0000 740
.59	.0005 591	.0003 849	.0002 639	.0001 803	.0001 228
.60	.0008 501	.0005 948	.0004 146	.0002 880	.0001 994
.61	.0012 768	.0009 079	.0006 432	.0004 540	.0003 194
.62	.0018 949	.0013 689	.0009 852	.0007 066	.0005 050
.63	.0027 789	.0020 389	.0014 904	.0010 857	.0007 882
.64	.0040 276	.0030 004	.0022 271	.0016 473	.0012 143
.65	.0057 696	.0043 630	.0032 873	.0024 683	.0018 472
.66	.0081 700	.0062 695 ⁺	.0047 938	.0036 529	.0027 744
.67	.0114 364	.0089 034	.0069 068	.0053 398	.0041 149
.68	.0158 256	.0124 959	.0098 321	.0077 102	.0060 268
.69	.0216 492	.0173 329	.0138 290	.0109 068	.0087 170
.70	.0292 773	.0237 609	.0192 181	.0154 929	.0124 597
.71	.0391 391	.0321 908	.0263 870	.0215 598	.0175 613
.72	.0517 200	.0430 973	.0357 933	.0296 329	.0244 582
.73	.0675 522	.0570 140	.0479 635 ⁻	.0402 240	.0330 326
.74	.0871 984	.0745 211	.0634 844	.0539 171	.0456 574
.75	.1112 273	.0962 246	.0829 869	.0713 567	.0611 803
.76	.1401 791	.1227 251	.1071 192	.0932 255 ⁺	.0809 094
.77	.1745 221	.1545 762	.1365 074	.1202 094	.1055 684
.78	.2146 002	.1922 311	.1717 042	.1529 485 ⁻	.1358 808
.79	.2605 740	.2359 819	.2131 257	.1919 739	.1724 790
.80	.3123 609	.2858 914	.2609 789	.2376 323	.2158 421
.81	.3695 782	.3417 268	.3151 860	.2900 026	.2662 043
.82	.4314 988	.4029 010	.3753 126	.3488 120	.3244 507
.83	.4970 276	.4684 329	.4405 100	.4133 628	.3870 744
.84	.5647 102	.5369 372	.5094 909	.4824 837	.4560 167
.85	.6327 799	.6066 505 ⁺	.5805 331	.5545 216	.5287 260

TABLES OF THE INCOMPLETE β -FUNCTION

100

$q = 7$

$p = 39$ to 4

$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$\cdot 3148\ 0463 \times \frac{1}{10^8}$	$\cdot 2668\ 9957 \times \frac{1}{10^8}$	$\cdot 2271\ 4857 \times \frac{1}{10^8}$	$\cdot 1940\ 2274 \times \frac{1}{10^8}$	$\cdot 1663\ 0521 \times \frac{1}{10^8}$	$\cdot 1430\ 2248 \times \frac{1}{10^8}$
$\cdot 0000\ 001$					
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$		
$\cdot 0000\ 005^+$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 010$	$\cdot 0000\ 006$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 0000\ 019$	$\cdot 0000\ 011$	$\cdot 0000\ 007$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 034$	$\cdot 0000\ 021$	$\cdot 0000\ 013$	$\cdot 0000\ 008$	$\cdot 0000\ 005^-$	$\cdot 0000\ 003$
$\cdot 0000\ 061$	$\cdot 0000\ 039$	$\cdot 0000\ 024$	$\cdot 0000\ 015^+$	$\cdot 0000\ 009$	$\cdot 0000\ 006$
$\cdot 0000\ 109$	$\cdot 0000\ 070$	$\cdot 0000\ 045^-$	$\cdot 0000\ 029$	$\cdot 0000\ 018$	$\cdot 0000\ 011$
$\cdot 0000\ 192$	$\cdot 0000\ 125^-$	$\cdot 0000\ 081$	$\cdot 0000\ 053$	$\cdot 0000\ 034$	$\cdot 0000\ 022$
$\cdot 0000\ 331$	$\cdot 0000\ 220$	$\cdot 0000\ 145^+$	$\cdot 0000\ 096$	$\cdot 0000\ 063$	$\cdot 0000\ 041$
$\cdot 0000\ 564$	$\cdot 0000\ 380$	$\cdot 0000\ 256$	$\cdot 0000\ 171$	$\cdot 0000\ 115^-$	$\cdot 0000\ 077$
$\cdot 0000\ 946$	$\cdot 0000\ 649$	$\cdot 0000\ 444$	$\cdot 0000\ 302$	$\cdot 0000\ 206$	$\cdot 0000\ 139$
$\cdot 0001\ 566$	$\cdot 0001\ 091$	$\cdot 0000\ 758$	$\cdot 0000\ 525^+$	$\cdot 0000\ 363$	$\cdot 0000\ 250^+$
$\cdot 0002\ 555^+$	$\cdot 0001\ 810$	$\cdot 0001\ 278$	$\cdot 0000\ 900$	$\cdot 0000\ 632$	$\cdot 0000\ 443$
$\cdot 0004\ 115^-$	$\cdot 0002\ 960$	$\cdot 0002\ 123$	$\cdot 0001\ 519$	$\cdot 0001\ 084$	$\cdot 0000\ 771$
$\cdot 0006\ 537$	$\cdot 0004\ 775^+$	$\cdot 0003\ 478$	$\cdot 0002\ 527$	$\cdot 0001\ 831$	$\cdot 0001\ 323$
$\cdot 0010\ 249$	$\cdot 0007\ 600$	$\cdot 0005\ 621$	$\cdot 0004\ 145^+$	$\cdot 0003\ 050^-$	$\cdot 0002\ 238$
$\cdot 0015\ 856$	$\cdot 0011\ 935^-$	$\cdot 0008\ 958$	$\cdot 0006\ 706$	$\cdot 0005\ 008$	$\cdot 0003\ 730$
$\cdot 0024\ 212$	$\cdot 0018\ 492$	$\cdot 0014\ 084$	$\cdot 0010\ 699$	$\cdot 0008\ 107$	$\cdot 0006\ 128$
$\cdot 0036\ 490$	$\cdot 0028\ 272$	$\cdot 0021\ 845^-$	$\cdot 0016\ 835^-$	$\cdot 0012\ 942$	$\cdot 0009\ 925^-$
$\cdot 0054\ 281$	$\cdot 0042\ 652$	$\cdot 0033\ 425^-$	$\cdot 0026\ 126$	$\cdot 0020\ 370$	$\cdot 0015\ 845^-$
$\cdot 0079\ 699$	$\cdot 0063\ 497$	$\cdot 0050\ 454$	$\cdot 0039\ 989$	$\cdot 0031\ 616$	$\cdot 0024\ 937$
$\cdot 0115\ 496$	$\cdot 0093\ 276$	$\cdot 0075\ 132$	$\cdot 0060\ 366$	$\cdot 0048\ 384$	$\cdot 0038\ 689$
$\cdot 0165\ 184$	$\cdot 0135\ 195^-$	$\cdot 0110\ 363$	$\cdot 0089\ 869$	$\cdot 0073\ 004$	$\cdot 0059\ 168$
$\cdot 0233\ 138$	$\cdot 0193\ 325^-$	$\cdot 0159\ 901$	$\cdot 0131\ 931$	$\cdot 0108\ 596$	$\cdot 0089\ 185^+$
$\cdot 0324\ 675^+$	$\cdot 0272\ 706$	$\cdot 0228\ 481$	$\cdot 0190\ 964$	$\cdot 0159\ 236$	$\cdot 0132\ 481$
$\cdot 0446\ 074$	$\cdot 0379\ 414$	$\cdot 0321\ 920$	$\cdot 0272\ 489$	$\cdot 0230\ 120$	$\cdot 0193\ 909$
$\cdot 0604\ 506$	$\cdot 0520\ 540$	$\cdot 0447\ 154$	$\cdot 0383\ 219$	$\cdot 0327\ 686$	$\cdot 0279\ 592$
$\cdot 0807\ 854$	$\cdot 0704\ 071$	$\cdot 0612\ 171$	$\cdot 0531\ 052$	$\cdot 0459\ 668$	$\cdot 0397\ 032$
$\cdot 1064\ 358$	$\cdot 0938\ 598$	$\cdot 0825\ 791$	$\cdot 0724\ 926$	$\cdot 0635\ 011$	$\cdot 0555\ 092$
$\cdot 1382\ 082$	$\cdot 1232\ 842$	$\cdot 1097\ 257$	$\cdot 0974\ 470$	$\cdot 0863\ 611$	$\cdot 0763\ 812$
$\cdot 1768\ 170$	$\cdot 1594\ 944$	$\cdot 1435\ 576$	$\cdot 1289\ 423$	$\cdot 1155\ 799$	$\cdot 1033\ 982$
$\cdot 2227\ 904$	$\cdot 2031\ 530$	$\cdot 1848\ 607$	$\cdot 1678\ 756$	$\cdot 1521\ 523$	$\cdot 1376\ 393$
$\cdot 2763\ 604$	$\cdot 2546\ 563$	$\cdot 2341\ 893$	$\cdot 2149\ 504$	$\cdot 1969\ 207$	$\cdot 1800\ 735^-$
$\cdot 3373\ 467$	$\cdot 3140\ 077$	$\cdot 2917\ 306$	$\cdot 2705\ 348$	$\cdot 2504\ 290$	$\cdot 2314\ 127$
$\cdot 4050\ 488$	$\cdot 3806\ 917$	$\cdot 3571\ 627$	$\cdot 3345\ 060$	$\cdot 3127\ 556$	$\cdot 2919\ 358$
$\cdot 4781\ 672$	$\cdot 4535\ 708$	$\cdot 4295\ 279$	$\cdot 4061\ 007$	$\cdot 3833\ 428$	$\cdot 3612\ 994$
$\cdot 5547\ 773$	$\cdot 5308\ 314$	$\cdot 5071\ 490$	$\cdot 4838\ 016$	$\cdot 4608\ 544$	$\cdot 4383\ 662$
$\cdot 6323\ 817$	$\cdot 6100\ 075^-$	$\cdot 5876\ 220$	$\cdot 5652\ 967$	$\cdot 5430\ 988$	$\cdot 5210\ 920$
$\cdot 7080\ 613$	$\cdot 6881\ 093$	$\cdot 6679\ 178$	$\cdot 6475\ 490$	$\cdot 6270\ 639$	$\cdot 6065\ 216$
$\cdot 7787\ 315^+$	$\cdot 7618\ 717$	$\cdot 7446\ 156$	$\cdot 7270\ 103$	$\cdot 7091\ 031$	$\cdot 6909\ 419$
$\cdot 8414\ 926$	$\cdot 8281\ 158$	$\cdot 8142\ 708$	$\cdot 7999\ 869$	$\cdot 7852\ 948$	$\cdot 7702\ 268$
$\cdot 8040\ 204$	$\cdot 7884\ 876$	$\cdot 7748\ 820$	$\cdot 7608\ 820$	$\cdot 7478\ 820$	$\cdot 7350\ 820$

$x = .53$ to 1.00 $q = 7$

	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .1233\ 9194 \times \frac{1}{10^8}$	$.1067\ 8149 \times \frac{1}{10^8}$	$.9267\ 8272 \times \frac{1}{10^9}$	$.8066\ 4422 \times \frac{1}{10^9}$	$.7039\ 804$	
π					
.53	.0000 001	.0000 001			
.54	.0000 002	.0000 001	.0000 001		
.55	.0000 004	.0000 002	.0000 001	.0000 001	.0000 001
.56	.0000 007	.0000 005-	.0000 003	.0000 002	.0000 001
.57	.0000 014	.0000 009	.0000 006	.0000 004	.0000 002
.58	.0000 027	.0000 018	.0000 011	.0000 007	.0000 005
.59	.0000 051	.0000 034	.0000 022	.0000 015-	.0000 010
.60	.0000 094	.0000 064	.0000 043	.0000 029	.0000 019
.61	.0000 172	.0000 118	.0000 081	.0000 055+	.0000 038
.62	.0000 309	.0000 216	.0000 150+	.0000 104	.0000 072
.63	.0000 548	.0000 388	.0000 274	.0000 193	.0000 136
.64	.0000 954	.0000 686	.0000 493	.0000 353	.0000 252
.65	.0001 638	.0001 197	.0000 872	.0000 634	.0000 460
.66	.0002 772	.0002 055+	.0001 521	.0001 123	.0000 827
.67	.0004 621	.0003 477	.0002 611	.0001 956	.0001 463
.68	.0007 593	.0005 797	.0004 416	.0003 357	.0002 547
.69	.0012 296	.0009 522	.0007 357	.0005 673	.0004 366
.70	.0019 625-	.0015 410	.0012 075-	.0009 442	.0007 369
.71	.0030 868	.0024 574	.0019 522	.0015 478	.0012 247
.72	.0047 847	.0038 609	.0031 090	.0024 986	.0020 041
.73	.0073 083	.0059 760	.0048 767	.0039 717	.0032 284
.74	.0109 983	.0091 114	.0075 330	.0062 159	.0051 194
.75	.0163 047	.0136 815-	.0114 574	.0095 764	.0079 894
.76	.0238 057	.0202 281	.0171 545-	.0145 203	.0122 681
.77	.0342 226	.0294 398	.0252 768	.0216 620	.0185 307
.78	.0484 254	.0421 634	.0366 419	.0317 853	.0275 237
.79	.0674 220	.0594 005+	.0522 370	.0458 553	.0401 837
.80	.0923 240	.0822 834	.0732 032	.0650 117	.0576 394
.81	.1242 808	.1120 176	.1007 888	.0905 324	.0811 863
.82	.1643 749	.1497 857	.1362 621	.1237 572	.1122 213
.83	.2134 769	.1966 053	.1807 753	.1659 591	.1521 244
.84	.2720 625-	.2531 430	.2351 778	.2181 605-	.2020 791
.85	.3400 075-	.3194 963	.2997 877	.2808 968	.2628 324
.86	.4163 890	.3949 687	.3741 443	.3539 491	.3344 103
.87	.4993 353	.4778 832	.4567 855-	.4360 873	.4158 289
.88	.5859 793	.5654 917	.5451 111	.5248 866	.5048 643
.89	.6725 743	.6540 475+	.6354 080	.6167 010	.5979 707
.90	.7548 165-	.7390 979	.7231 059	.7068 758	.6904 428
.91	.8283 823	.8160 211	.8033 051	.7902 564	.7768 978
.92	.8896 279	.8807 648	.8715 473	.8619 845+	.8520 871
.93	.9363 151	.9306 537	.9247 019	.9184 601	.9119 297
.94	.9681 529	.9650 390	.9617 300	.9582 226	.9545 134
.95	.9869 141	.9855 150-	.9840 124	.9824 028	.9806 825
.96	.9959 579	.9954 879	.9949 778	.9944 256	.9938 292
.97	.9992 053	.9991 053	.9989 956	.9988 756	.9987 447
.98	.9999 315+	.9999 222	.9999 119	.9999 006	.9998 880
.99	.9999 992	.9999 991	.9999 990	.9999 988	.9999 987
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $q = 7.5$ $p = 7$

	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$B(p, q) = .4016\ 5879 \times \frac{1}{10^4}$	$.2816\ 6171 \times \frac{1}{10^4}$	$.2008\ 2939 \times \frac{1}{10^4}$	$.1453\ 7379 \times \frac{1}{10^4}$	$.1066\ 9062 \times \frac{1}{10^4}$	$.7929\ 479$	
$\frac{x}{.04}$	.0000 001					
.05	.0000 004					
.06	.0000 010	.0000 005 ⁺	.0000 002	.0000 001		
.07	.0000 048	.0000 017	.0000 006	.0000 002	.0000 001	
.08	.0000 123	.0000 046	.0000 017	.0000 006	.0000 002	.0000 001
.09	.0000 279	.0000 111	.0000 044	.0000 017	.0000 007	.0000 003
.10	.0000 577	.0000 243	.0000 101	.0000 041	.0000 017	.0000 007
.11	.0001 108	.0000 489	.0000 213	.0000 092	.0000 039	.0000 017
.12	.0001 998	.0000 920	.0000 418	.0000 188	.0000 084	.0000 037
.13	.0003 417	.0001 636	.0000 774	.0000 362	.0000 168	.0000 077
.14	.0005 586	.0002 774	.0001 361	.0000 661	.0000 317	.0000 151
.15	.0008 783	.0004 512	.0002 290	.0001 150 ⁻	.0000 572	.0000 288
.16	.0013 348	.0007 077	.0003 708	.0001 922	.0000 986	.0000 501
.17	.0019 688	.0010 752	.0005 804	.0003 099	.0001 638	.0000 858
.18	.0028 278	.0015 880	.0008 814	.0004 840	.0002 632	.0001 418
.19	.0039 661	.0022 866	.0013 031	.0007 348	.0004 102	.0002 270
.20	.0054 448	.0032 182	.0018 804	.0010 872	.0006 224	.0003 531
.21	.0073 312	.0044 367	.0026 546	.0015 716	.0009 215 ⁻	.0005 354
.22	.0096 984	.0060 027	.0036 734	.0022 246	.0013 342	.0007 931
.23	.0126 246	.0079 827	.0049 911	.0030 885 ⁻	.0018 928	.0011 490
.24	.0161 917	.0104 494	.0066 688	.0042 124	.0026 356	.0016 345
.25	.0204 845 ⁻	.0134 804	.0087 736	.0056 522	.0036 070	.0022 817
.26	.0255 892	.0171 573	.0113 784	.0074 699	.0048 582	.0031 321
.27	.0315 922	.0215 651	.0145 615 ⁺	.0097 343	.0064 469	.0042 320
.28	.0385 780	.0267 902	.0184 054	.0125 197	.0084 378	.0056 381
.29	.0466 280	.0329 198	.0229 958	.0159 059	.0109 016	.0074 080
.30	.0558 188	.0400 396	.0284 203	.0199 770	.0139 152	.0096 113
.31	.0662 204	.0482 326	.0347 674	.0248 203	.0175 607	.0123 208
.32	.0778 947	.0575 776	.0421 243	.0305 256	.0219 246	.0156 160
.33	.0908 939	.0681 467	.0505 761	.0371 829	.0270 969	.0195 851
.34	.1052 591	.0800 047	.0602 030	.0448 816	.0331 694	.0243 151
.35	.1210 189	.0932 066	.0710 797	.0537 084	.0402 349	.0298 990
.36	.1381 888	.1077 903	.0832 726	.0637 457	.0483 847	.0364 341
.37	.1567 695 ⁻	.1238 056	.0968 389	.0750 696	.0577 077	.0440 130
.38	.1767 469	.1412 524	.1118 243	.0877 481	.0682 879	.0527 320
.39	.1980 915 ⁻	.1601 398	.1282 618	.1018 393	.0802 026	.0626 807
.40	.2207 580	.1804 558	.1461 705 ⁺	.1173 896	.0935 206	.0739 440
.41	.2446 858	.2021 718	.1655 541	.1344 321	.1083 000	.0866 000
.42	.2697 991	.2252 432	.1864 000	.1529 851	.1245 866	.1007 181
.43	.2960 075 ⁻	.2496 089	.2086 789	.1730 507	.1424 119	.1163 552
.44	.3232 069	.2751 915 ⁺	.2323 440	.1946 140	.1617 916	.1335 542
.45	.3512 809	.3018 985 ⁻	.2573 312	.2176 421	.1827 241	.1523 430
.46	.3801 019	.3296 221	.2835 594	.2420 838	.2051 896	.1727 340
.47	.4095 323	.3582 413	.3109 306	.2678 693	.2291 492	.1947 181
.48	.4394 271	.3876 228	.3393 313	.2949 106	.2545 443	.2182 680

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 7.5$

	$p = 7.5$	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$
$B(p, q) = .4016\ 5879 \times \frac{1}{10^1}$	$.2816\ 6171 \times \frac{1}{10^1}$	$.2008\ 2939 \times \frac{1}{10^1}$	$.1453\ 7379 \times \frac{1}{10^1}$	$.1066\ 9062$	
.71	.9533 720	.9423 006	.9297 398	.9156 790	.9001 301
.72	.9614 220	.9520 067	.9412 495 ⁺	.9291 229	.9156 185 ⁺
.73	.9684 078	.9604 882	.9513 772	.9410 349	.9294 377
.74	.9744 108	.9678 266	.9601 999	.9514 834	.9416 422
.75	.9795 155 ⁺	.9741 092	.9678 046	.9605 504	.9523 049
.76	.9838 083	.9794 279	.9742 855 ⁻	.9683 291	.9615 136
.77	.9873 754	.9838 765 ⁺	.9797 420	.9749 215 ⁻	.9693 695 ⁻
.78	.9903 016	.9875 496	.9842 765 ⁺	.9804 357	.9759 832
.79	.9926 688	.9905 402	.9879 922	.9849 831	.9814 725 ⁺
.80	.9945 552	.9929 384	.9909 909	.9886 763	.9859 588
.81	.9960 339	.9948 300	.9933 709	.9916 259	.9895 644
.82	.9971 722	.9962 953	.9952 258	.9939 389	.9924 093
.83	.9980 312	.9974 077	.9966 427	.9957 166	.9946 090
.84	.9986 652	.9982 338	.9977 012	.9970 526	.9962 722
.85	.9991 217	.9988 321	.9984 725 ⁻	.9980 319	.9974 986
.86	.9994 414	.9992 536	.9990 190	.9987 298	.9983 778
.87	.9996 583	.9995 412	.9993 941	.9992 117	.9989 883
.88	.9998 002	.9997 304	.9996 422	.9995 323	.9993 969
.89	.9998 892	.9998 498	.9997 997	.9997 368	.9996 590
.90	.9999 423	.9999 214	.9998 946	.9998 610	.9998 190
.91	.9999 721	.9999 619	.9999 486	.9999 319	.9999 109
.92	.9999 877	.9999 832	.9999 772	.9999 696	.9999 601
.93	.9999 952	.9999 934	.9999 910	.9999 880	.9999 841
.94	.9999 984	.9999 978	.9999 970	.9999 959	.9999 946
.95	.9999 996	.9999 994	.9999 992	.9999 989	.9999 985 ⁺
.96	.9999 999	.9999 999	.9999 998	.9999 998	.9999 997
.97	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

09 to 70

$q = 7.5$

$p = 10$

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$q, \eta = .5962\ 1226 \times \frac{1}{10^8}$		$.4531\ 1311 \times \frac{1}{10^8}$	$.2694\ 1860 \times \frac{1}{10^8}$	$.1657\ 9606 \times \frac{1}{10^8}$	$.1051\ 3897 \times \frac{1}{10^8}$	$.6846\ 2583$
09	.0000 001					
10	.0000 003	.0000 001				
11	.0000 007	.0000 003				
12	.0000 016	.0000 007	.0000 001			
13	.0000 035 ⁺	.0000 016	.0000 003	.0000 001		
14	.0000 071	.0000 033	.0000 007	.0000 001		
15	.0000 137	.0000 067	.0000 015 ⁺	.0000 003	.0000 001	
16	.0000 253	.0000 126	.0000 031	.0000 007	.0000 002	
17	.0000 446	.0000 230	.0000 060	.0000 015 ⁺	.0000 004	.0000 001
18	.0000 757	.0000 401	.0000 110	.0000 030	.0000 008	.0000 002
19	.0001 245 ⁺	.0000 678	.0000 196	.0000 055 ⁺	.0000 015 ⁺	.0000 004
20	.0001 987	.0001 109	.0000 338	.0000 100	.0000 029	.0000 008
21	.0003 085 ⁺	.0001 764	.0000 564	.0000 176	.0000 054	.0000 016
22	.0004 675 ⁺	.0002 735 ⁻	.0000 916	.0000 299	.0000 095 ⁺	.0000 030
23	.0006 927	.0004 141	.0001 449	.0000 494	.0000 165 ⁻	.0000 054
24	.0010 053	.0006 136	.0002 238	.0000 796	.0000 277	.0000 094
25	.0014 316	.0008 914	.0003 384	.0001 253	.0000 454	.0000 161
26	.0020 030	.0012 712	.0005 015 ⁻	.0001 929	.0000 726	.0000 268
27	.0027 569	.0017 821	.0007 294	.0002 912	.0001 137	.0000 435
28	.0037 373	.0024 588	.0010 426	.0004 313	.0001 745 ⁺	.0000 692
29	.0049 946	.0033 423	.0014 664	.0006 277	.0002 629	.0001 080
30	.0065 864	.0044 803	.0020 314	.0008 988	.0003 891	.0001 652
31	.0085 770	.0059 273	.0027 741	.0012 671	.0005 664	.0002 483
32	.0110 380	.0077 452	.0037 377	.0017 607	.0008 118	.0003 671
33	.0140 474	.0100 031	.0049 726	.0024 133	.0011 464	.0005 343
34	.0176 891	.0127 772	.0065 363	.0032 650 ⁺	.0015 967	.0007 661
35	.0220 527	.0161 503	.0084 944	.0043 634	.0021 946	.0010 831
36	.0272 316	.0202 114	.0109 200	.0057 633	.0029 787	.0015 108
37	.0333 229	.0250 544	.0138 942	.0075 282	.0039 950 ⁺	.0020 809
38	.0404 246	.0307 777	.0175 050 ⁺	.0097 295 ⁻	.0052 974	.0028 313
39	.0486 353	.0374 822	.0218 476	.0124 474	.0069 482	.0038 078
40	.0580 511	.0452 699	.0270 228	.0157 703	.0090 189	.0050 645
41	.0687 645 ⁺	.0542 422	.0331 358	.0197 949	.0115 902	.0066 644
42	.0808 618	.0644 976	.0402 955 ⁺	.0246 247	.0147 520	.0086 804
43	.0944 207	.0761 297	.0486 118	.0303 697	.0186 036	.0111 952
44	.1095 086	.0892 247	.0581 941	.0371 450 ⁺	.0232 526	.0143 020
45	.1261 797	.1038 592	.0691 489	.0450 687	.0288 145 ⁻	.0181 041
46	.1444 737	.1200 975 ⁺	.0815 772	.0542 599	.0354 109	.0227 148
47	.1644 128	.1379 894	.0955 718	.0648 367	.0431 685 ⁻	.0282 561
48	.1860 006	.1575 679	.1112 147	.0769 134	.0522 164	.0348 580
49	.2092 207	.1788 469	.1285 740	.0905 970	.0626 840	.0426 563
50	.2340 348	.2018 199	.1477 014	.1059 850 ⁺	.0746 977	.0517 910
51	.2603 825 ⁺	.2264 577	.1686 290	.1231 612	.0883 784	.0624 030
52	.2881 810	.2527 080	.1913 676	.1421 930	.1038 368	.0746 313

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.98$ $q = 7.5$

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$B(p, q) = .5962 \ 1226 \times \frac{1}{10^5}$	$.4531 \ 1311 \times \frac{1}{10^5}$	$.2694 \ 1860 \times \frac{1}{10^5}$	$.1657 \ 9606 \times \frac{1}{10^5}$	$.1051 \ 3897 \times \frac{1}{10^5}$	
$\cdot 71$	$\cdot 8647 \ 231$	$\cdot 8449 \ 917$	$\cdot 8019 \ 165^+$	$\cdot 7547 \ 671$	$\cdot 7045 \ 530$
$\cdot 72$	$\cdot 8845 \ 376$	$\cdot 8670 \ 365^+$	$\cdot 8284 \ 227$	$\cdot 7855 \ 613$	$\cdot 7392 \ 709$
$\cdot 73$	$\cdot 9024 \ 637$	$\cdot 8871 \ 192$	$\cdot 8529 \ 070$	$\cdot 8144 \ 041$	$\cdot 7722 \ 434$
$\cdot 74$	$\cdot 9185 \ 135^+$	$\cdot 9052 \ 234$	$\cdot 8752 \ 836$	$\cdot 8411 \ 272$	$\cdot 8032 \ 136$
$\cdot 75$	$\cdot 9327 \ 262$	$\cdot 9213 \ 639$	$\cdot 8955 \ 042$	$\cdot 8656 \ 038$	$\cdot 8319 \ 659$
$\cdot 76$	$\cdot 9451 \ 657$	$\cdot 9355 \ 851$	$\cdot 9135 \ 591$	$\cdot 8877 \ 520$	$\cdot 8583 \ 320$
$\cdot 77$	$\cdot 9559 \ 180$	$\cdot 9479 \ 585^-$	$\cdot 9294 \ 761$	$\cdot 9075 \ 360$	$\cdot 8821 \ 952$
$\cdot 78$	$\cdot 9650 \ 884$	$\cdot 9585 \ 802$	$\cdot 9433 \ 182$	$\cdot 9249 \ 657$	$\cdot 9034 \ 932$
$\cdot 79$	$\cdot 9727 \ 979$	$\cdot 9675 \ 671$	$\cdot 9551 \ 808$	$\cdot 9400 \ 952$	$\cdot 9222 \ 189$
$\cdot 80$	$\cdot 9791 \ 788$	$\cdot 9750 \ 526$	$\cdot 9651 \ 872$	$\cdot 9530 \ 198$	$\cdot 9384 \ 190$
$\cdot 81$	$\cdot 9843 \ 715^-$	$\cdot 9811 \ 822$	$\cdot 9734 \ 840$	$\cdot 9638 \ 709$	$\cdot 9521 \ 910$
$\cdot 82$	$\cdot 9885 \ 195^-$	$\cdot 9861 \ 089$	$\cdot 9802 \ 354$	$\cdot 9728 \ 103$	$\cdot 9636 \ 775^-$
$\cdot 83$	$\cdot 9917 \ 661$	$\cdot 9899 \ 886$	$\cdot 9856 \ 172$	$\cdot 9800 \ 235^+$	$\cdot 9730 \ 594$
$\cdot 84$	$\cdot 9942 \ 506$	$\cdot 9929 \ 754$	$\cdot 9898 \ 104$	$\cdot 9857 \ 118$	$\cdot 9805 \ 475^-$
$\cdot 85$	$\cdot 9961 \ 045^-$	$\cdot 9952 \ 175^-$	$\cdot 9929 \ 957$	$\cdot 9900 \ 843$	$\cdot 9863 \ 723$
$\cdot 86$	$\cdot 9974 \ 492$	$\cdot 9968 \ 533$	$\cdot 9953 \ 473$	$\cdot 9933 \ 505^-$	$\cdot 9907 \ 746$
$\cdot 87$	$\cdot 9983 \ 938$	$\cdot 9980 \ 091$	$\cdot 9970 \ 281$	$\cdot 9957 \ 122$	$\cdot 9939 \ 951$
$\cdot 88$	$\cdot 9990 \ 334$	$\cdot 9987 \ 961$	$\cdot 9981 \ 858$	$\cdot 9973 \ 578$	$\cdot 9962 \ 648$
$\cdot 89$	$\cdot 9994 \ 483$	$\cdot 9993 \ 096$	$\cdot 9989 \ 498$	$\cdot 9984 \ 560$	$\cdot 9977 \ 968$
$\cdot 90$	$\cdot 9997 \ 043$	$\cdot 9996 \ 283$	$\cdot 9994 \ 292$	$\cdot 9991 \ 529$	$\cdot 9987 \ 800$
$\cdot 91$	$\cdot 9998 \ 531$	$\cdot 9998 \ 145^+$	$\cdot 9997 \ 125^-$	$\cdot 9995 \ 694$	$\cdot 9993 \ 740$
$\cdot 92$	$\cdot 9999 \ 336$	$\cdot 9999 \ 157$	$\cdot 9998 \ 682$	$\cdot 9998 \ 007$	$\cdot 9997 \ 076$
$\cdot 93$	$\cdot 9999 \ 733$	$\cdot 9999 \ 660$	$\cdot 9999 \ 463$	$\cdot 9999 \ 181$	$\cdot 9998 \ 788$
$\cdot 94$	$\cdot 9999 \ 908$	$\cdot 9999 \ 883$	$\cdot 9999 \ 813$	$\cdot 9999 \ 712$	$\cdot 9999 \ 570$
$\cdot 95$	$\cdot 9999 \ 975^-$	$\cdot 9999 \ 967$	$\cdot 9999 \ 947$	$\cdot 9999 \ 918$	$\cdot 9999 \ 876$
$\cdot 96$	$\cdot 9999 \ 995$	$\cdot 9999 \ 993$	$\cdot 9999 \ 989$	$\cdot 9999 \ 983$	$\cdot 9999 \ 974$
$\cdot 97$	$\cdot 9999 \ 999$	$\cdot 9999 \ 999$	$\cdot 9999 \ 999$	$\cdot 9999 \ 998$	$\cdot 9999 \ 997$
$\cdot 98$	$1.0000 \ 000$	$1.0000 \ 000$	$1.0000 \ 000$	$1.0000 \ 000$	$1.0000 \ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

to 80

$q = 7.5$

$p = 1$

$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$= .4564\ 1722 \times \frac{1}{10^6}$	$.3107\ 5215 \times \frac{1}{10^6}$	$.2150\ 2391 \times \frac{1}{10^6}$	$.1572\ 0514 \times \frac{1}{10^6}$	$.1071\ 2834 \times \frac{1}{10^6}$	$.7430\ 3927$
.0000 001					
.0000 002	.0000 001				
.0000 005 ⁻	.0000 001				
.0000 009	.0000 003	.0000 001			
.0000 017	.0000 005 ⁺	.0000 002	.0000 001		
.0000 032	.0000 010	.0000 003	.0000 001		
.0000 056	.0000 019	.0000 006	.0000 002	.0000 001	
.0000 097	.0000 035 ⁻	.0000 012	.0000 004	.0000 001	
.0000 164	.0000 061	.0000 022	.0000 009	.0000 004	.0000 001
.0000 270	.0000 104	.0000 039	.0000 019	.0000 008	.0000 002
.0000 430	.0000 173	.0000 068	.0000 036	.0000 016	.0000 007
.0000 689	.0000 283	.0000 115 ⁻	.0000 069	.0000 039	.0000 019
.0001 070	.0000 454	.0000 169	.0000 087	.0000 042	.0000 019
.0001 632	.0000 714	.0000 308	.0000 141	.0000 073 ⁺	.0000 027
.0002 447	.0001 104	.0000 491	.0000 213 ⁺	.0000 103	.0000 040
.0003 613	.0001 678	.0000 768	.0000 331	.0000 153 ⁺	.0000 060
.0005 255 ⁻	.0002 510	.0001 182	.0000 500	.0000 214	.0000 113
.0007 534	.0003 700	.0001 791	.0000 736	.0000 315	.0000 169
.0010 657	.0005 375 ⁻	.0002 673	.0001 114	.0000 447	.0000 266
.0014 881	.0007 793	.0003 932	.0001 487	.0000 627	.0000 376
.0020 523	.0010 895 ⁺	.0005 795	.0002 930 ⁻	.0001 507	.0000 562
.0027 973	.0015 220	.0008 168	.0004 329	.0002 268	.0001 760
.0037 697	.0021 007	.0011 548	.0006 270	.0003 365	.0002 787
.0050 252	.0028 664	.0016 130	.0008 965 ⁻	.0004 926	.0004 678
.0066 291	.0038 680	.0022 268	.0012 663	.0007 119	.0006 963
.0086 571	.0051 643	.0030 399	.0017 676	.0010 162	.0009 567
.0111 959	.0068 244	.0041 030	.0024 394	.0014 433	.0013 436
.0143 438	.0089 288	.0054 845 ⁺	.0034 297	.0019 987	.0018 755
.0182 101	.0115 794	.0072 595	.0049 968	.0027 570	.0026 219
.0229 154	.0148 541	.0095 952	.0069 166	.0037 504	.0036 245
.0285 902	.0188 978	.0123 327	.0099 549	.0050 245 ⁺	.0049 000
.0353 745 ⁺	.0238 317	.0158 535 ⁺	.0131 239	.0067 864	.0066 606
.0434 150 ⁺	.0297 971	.0201 964	.0145 420	.0089 304	.0088 878
.0528 635 ⁺	.0369 458	.0255 038	.0171 953	.0117 533 ⁺	.0116 894
.0638 735 ⁺	.0451 375 ⁺	.0319 395	.0221 866	.0145 567	.0145 063
.0765 967	.0554 374	.0396 326	.0280 114	.0180 608	.0179 893
.0911 791	.0671 125	.0488 148	.0351 199	.0225 656	.0224 712
.1077 560	.0806 278	.0596 274	.0439 294	.0281 696	.0280 690
.1264 474	.0961 414	.0722 620	.0544 476	.0350 699	.0349 590
.1473 523	.1137 990	.0868 971	.0676 695 ⁺	.0431 228	.0429 942
.1705 434	.1337 280	.1037 018	.0829 694	.0535 697	.0534 294
.1960 618	.1560 316	.1228 300	.0957 154	.0668 811	.0667 224
.2230 118	.1802 878	.1480 100	.1100 678		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.99$ $q = 7.5$

	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$H(p, q) = .4564\ 1722 \times 10^6$	$.3107\ 5215 \times 10^6$	$.2156\ 2394 \times 10^6$	$.1522\ 0514 \times 10^6$	$.1001\ 28$	
x					
.81	.0222 542	.0030 340	.8834 207	.8608 040	.8362 10
.82	.0308 220	.0240 607	.0081 130	.8803 111	.8686 18
.83	.0545 264	.0427 738	.0202 804	.0140 558	.8670 80
.84	.0665 474	.0575 133	.0470 231	.0350 202	.0215 07
.85	.0761 232	.0693 949	.0614 802	.0523 426	.0410 08
.86	.0835 324	.0786 068	.0720 480	.0662 180	.0584 51
.87	.0890 707	.0857 424	.0817 287	.0760 750	.0714 26
.88	.0930 700	.0908 815 [†]	.0882 073	.0850 041	.0812 21
.89	.0958 410	.0944 704	.0927 840	.0907 300	.0882 97
.90	.0976 545	.0968 521	.0958 538	.0946 300	.0931 53
.91	.0987 741	.0983 406	.0977 040	.0971 160	.0962 80
.92	.0994 160	.0992 020	.0986 008	.0985 001	.0981 60
.93	.0997 537	.0996 603	.0995 402	.0994 882	.0994 08
.94	.0999 110	.0998 761	.0998 408	.0997 728	.0996 90
.95	.0999 740	.0999 634	.0999 406	.0999 317	.0999 08
.96	.0999 944	.0999 921	.0999 800	.0999 840	.0999 70
.97	.0999 993	.0999 980	.0999 985 [†]	.0999 980	.0999 97
.98	1.0000 000	.0999 990	.0999 990	.0999 990	.0999 99
.99		1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

0.90

$q = 7.5$

$p = 22$ to

$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$
$\cdot 5848\ 0189 \times \frac{1}{10^7}$	$\cdot 4361\ 2345 \times \frac{1}{10^7}$	$\cdot 3288\ 7998 \times \frac{1}{10^7}$	$\cdot 2505\ 7522 \times \frac{1}{10^7}$	$\cdot 1927\ 5017 \times \frac{1}{10^7}$	$\cdot 1495\ 9715 \times \frac{1}{10^7}$
$\cdot 0000\ 001$					
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 0000\ 005^+$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 009$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 017$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 030$	$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 052$	$\cdot 0000\ 023$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 087$	$\cdot 0000\ 040$	$\cdot 0000\ 018$	$\cdot 0000\ 008$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 145^+$	$\cdot 0000\ 068$	$\cdot 0000\ 032$	$\cdot 0000\ 015^-$	$\cdot 0000\ 007$	$\cdot 0000\ 003$
$\cdot 0000\ 238$	$\cdot 0000\ 115^-$	$\cdot 0000\ 055^+$	$\cdot 0000\ 026$	$\cdot 0000\ 012$	$\cdot 0000\ 006$
$\cdot 0000\ 382$	$\cdot 0000\ 189$	$\cdot 0000\ 093$	$\cdot 0000\ 045^+$	$\cdot 0000\ 022$	$\cdot 0000\ 011$
$\cdot 0000\ 603$	$\cdot 0000\ 307$	$\cdot 0000\ 155^-$	$\cdot 0000\ 077$	$\cdot 0000\ 038$	$\cdot 0000\ 019$
$\cdot 0000\ 940$	$\cdot 0000\ 490$	$\cdot 0000\ 253$	$\cdot 0000\ 130$	$\cdot 0000\ 066$	$\cdot 0000\ 033$
$\cdot 0001\ 442$	$\cdot 0000\ 769$	$\cdot 0000\ 407$	$\cdot 0000\ 214$	$\cdot 0000\ 111$	$\cdot 0000\ 058$
$\cdot 0002\ 182$	$\cdot 0001\ 192$	$\cdot 0000\ 645^+$	$\cdot 0000\ 347$	$\cdot 0000\ 185^-$	$\cdot 0000\ 098$
$\cdot 0003\ 258$	$\cdot 0001\ 820$	$\cdot 0001\ 008$	$\cdot 0000\ 554$	$\cdot 0000\ 302$	$\cdot 0000\ 164$
$\cdot 0004\ 802$	$\cdot 0002\ 741$	$\cdot 0001\ 552$	$\cdot 0000\ 872$	$\cdot 0000\ 486$	$\cdot 0000\ 269$
$\cdot 0006\ 988$	$\cdot 0004\ 076$	$\cdot 0002\ 358$	$\cdot 0001\ 353$	$\cdot 0000\ 771$	$\cdot 0000\ 437$
$\cdot 0010\ 047$	$\cdot 0005\ 984$	$\cdot 0003\ 535^+$	$\cdot 0002\ 073$	$\cdot 0001\ 206$	$\cdot 0000\ 697$
$\cdot 0014\ 276$	$\cdot 0008\ 679$	$\cdot 0005\ 234$	$\cdot 0003\ 132$	$\cdot 0001\ 861$	$\cdot 0001\ 098$
$\cdot 0020\ 054$	$\cdot 0012\ 439$	$\cdot 0007\ 653$	$\cdot 0004\ 673$	$\cdot 0002\ 833$	$\cdot 0001\ 706$
$\cdot 0027\ 861$	$\cdot 0017\ 624$	$\cdot 0011\ 058$	$\cdot 0006\ 887$	$\cdot 0004\ 259$	$\cdot 0002\ 616$
$\cdot 0038\ 291$	$\cdot 0024\ 690$	$\cdot 0015\ 793$	$\cdot 0010\ 027$	$\cdot 0006\ 321$	$\cdot 0003\ 959$
$\cdot 0052\ 077$	$\cdot 0034\ 214$	$\cdot 0022\ 300$	$\cdot 0014\ 427$	$\cdot 0009\ 269$	$\cdot 0005\ 916$
$\cdot 0070\ 103$	$\cdot 0046\ 910$	$\cdot 0031\ 143$	$\cdot 0020\ 523$	$\cdot 0013\ 432$	$\cdot 0008\ 733$
$\cdot 0093\ 429$	$\cdot 0063\ 650^-$	$\cdot 0043\ 024$	$\cdot 0028\ 870$	$\cdot 0019\ 239$	$\cdot 0012\ 739$
$\cdot 0123\ 301$	$\cdot 0085\ 488$	$\cdot 0058\ 814$	$\cdot 0040\ 169$	$\cdot 0027\ 249$	$\cdot 0018\ 366$
$\cdot 0161\ 170$	$\cdot 0113\ 680$	$\cdot 0079\ 570$	$\cdot 0055\ 295^-$	$\cdot 0038\ 166$	$\cdot 0026\ 177$
$\cdot 0208\ 692$	$\cdot 0149\ 696$	$\cdot 0106\ 564$	$\cdot 0075\ 320$	$\cdot 0052\ 881$	$\cdot 0036\ 893$
$\cdot 0267\ 737$	$\cdot 0195\ 234$	$\cdot 0141\ 298$	$\cdot 0101\ 543$	$\cdot 0072\ 490$	$\cdot 0051\ 427$
$\cdot 0340\ 371$	$\cdot 0252\ 227$	$\cdot 0185\ 525^-$	$\cdot 0135\ 512$	$\cdot 0098\ 333$	$\cdot 0070\ 913$
$\cdot 0428\ 840$	$\cdot 0322\ 831$	$\cdot 0241\ 249$	$\cdot 0179\ 043$	$\cdot 0132\ 016$	$\cdot 0096\ 745^+$
$\cdot 0535\ 539$	$\cdot 0409\ 412$	$\cdot 0310\ 731$	$\cdot 0234\ 232$	$\cdot 0175\ 436$	$\cdot 0130\ 603$
$\cdot 0662\ 955^-$	$\cdot 0514\ 511$	$\cdot 0396\ 465^+$	$\cdot 0303\ 456$	$\cdot 0230\ 796$	$\cdot 0174\ 485^+$
$\cdot 0813\ 606$	$\cdot 0640\ 794$	$\cdot 0501\ 154$	$\cdot 0389\ 356$	$\cdot 0300\ 610$	$\cdot 0230\ 722$
$\cdot 0989\ 958$	$\cdot 0790\ 984$	$\cdot 0627\ 652$	$\cdot 0494\ 809$	$\cdot 0387\ 684$	$\cdot 0301\ 985^-$
$\cdot 1194\ 326$	$\cdot 0967\ 772$	$\cdot 0778\ 894$	$\cdot 0622\ 873$	$\cdot 0495\ 092$	$\cdot 0391\ 270$
$\cdot 1428\ 755^+$	$\cdot 1173\ 704$	$\cdot 0957\ 798$	$\cdot 0776\ 707$	$\cdot 0626\ 111$	$\cdot 0501\ 870$
$\cdot 1694\ 898$	$\cdot 1411\ 061$	$\cdot 1167\ 146$	$\cdot 0959\ 463$	$\cdot 0784\ 137$	$\cdot 0637\ 302$
$\cdot 1993\ 877$	$\cdot 1681\ 708$	$\cdot 1409\ 443$	$\cdot 1174\ 160$	$\cdot 0972\ 570$	$\cdot 0801\ 218$
$\cdot 2326\ 149$	$\cdot 1986\ 945^-$	$\cdot 1686\ 749$	$\cdot 1423\ 515^-$	$\cdot 1194\ 659$	$\cdot 0997\ 271$
$\cdot 2691\ 373$	$\cdot 2327\ 345^-$	$\cdot 2000\ 511$	$\cdot 1709\ 765^+$	$\cdot 1453\ 327$	$\cdot 1228\ 944$
$\cdot 3088\ 202$	$\cdot 2702\ 621$	$\cdot 2385\ 116$	$\cdot 2096\ 916$	$\cdot 1843\ 511$	$\cdot 1628\ 444$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .91$ to $.99$ $q = 7.5$

	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$B(p, q) = .5848\ 0189 \times \frac{1}{10^7}$	$.4361\ 2345 \times \frac{1}{10^7}$	$.3288\ 7998 \times \frac{1}{10^7}$	$.2505\ 7522 \times \frac{1}{10^7}$	$.1927\ 5017 \times \frac{1}{10^7}$	
x					
.91	.9941 042	.9927 036	.9910 690	.9891 785 ⁺	.9870 109
.92	.9970 388	.9963 025 ⁻	.9954 336	.9944 177	.9932 401
.93	.9986 798	.9983 366	.9979 274	.9974 437	.9968 769
.94	.9994 962	.9993 596	.9991 949	.9989 981	.9987 651
.95	.9998 446	.9998 006	.9997 471	.9996 825 ⁻	.9996 051
.96	.9999 647	.9999 544	.9999 416	.9999 260	.9999 071
.97	.9999 951	.9999 936	.9999 917	.9999 894	.9999 866
.98	.9999 997	.9999 996	.9999 995 ⁺	.9999 994	.9999 992
.99	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

0.99

$q = 7.5$

$p = 2$

$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$
$= .1170\ 7603 \times \frac{1}{10^7}$	$.9234\ 1055 \times \frac{1}{10^6}$	$.7336\ 7342 \times \frac{1}{10^5}$	$.5809\ 3874 \times \frac{1}{10^4}$	$.4720\ 0002 \times \frac{1}{10^3}$	$.3728\ 1011 \times \frac{1}{10^2}$
.0000 001	.0000 001				
.0000 001	.0000 001	.0000 001			
.0000 003	.0000 001	.0000 001			
.0000 005 ⁺	.0000 002	.0000 001	.0000 001		
.0000 009	.0000 005 ⁻	.0000 002	.0000 001	.0000 001	
.0000 017	.0000 008	.0000 004	.0000 002	.0000 001	
.0000 030	.0000 008 ⁺	.0000 008	.0000 004	.0000 002	.0000 001
.0000 052	.0000 027	.0000 014	.0000 007	.0000 004	.0000 002
.0000 088	.0000 047	.0000 025 ⁺	.0000 013	.0000 007	.0000 004
.0000 148	.0000 081	.0000 044	.0000 024	.0000 013	.0000 007
.0000 246	.0000 137	.0000 076	.0000 042	.0000 023	.0000 013
.0000 401	.0000 220	.0000 130	.0000 073	.0000 041	.0000 024
.0000 644	.0000 376	.0000 218	.0000 126	.0000 072	.0000 041
.0001 021	.0000 608	.0000 360	.0000 212	.0000 124	.0000 072
.0001 597	.0000 969	.0000 585 ⁻	.0000 351	.0000 210	.0000 125
.0002 464	.0001 525 ⁻	.0000 938	.0000 574	.0000 430	.0000 212
.0003 753	.0002 367	.0001 484	.0000 926	.0001 575 ⁺	.0000 435
.0005 644	.0003 626	.0002 317	.0001 473	.0000 932	.0000 575
.0008 383	.0005 486	.0003 570	.0002 311	.0001 480	.0000 935 ⁺
.0012 304	.0008 106	.0005 430	.0003 570	.0002 348	.0001 543
.0017 846	.0012 098	.0008 157	.0005 472	.0003 654	.0002 428
.0025 586	.0017 645 ⁻	.0012 104	.0008 261	.0005 612	.0003 595
.0036 269	.0025 437	.0017 745 ⁺	.0012 318	.0008 510	.0005 854
.0050 841	.0036 249	.0025 710	.0018 145 ⁺	.0012 246	.0008 914
.0070 488	.0051 076	.0036 819	.0026 411	.0018 857	.0014 404
.0096 672	.0071 169	.0052 125 ⁻	.0037 091	.0022 562	.0019 905
.0131 168	.0098 076	.0072 061	.0054 015 ⁺	.0029 806	.0026 207
.0176 094	.0133 688	.0100 985 ⁻	.0075 017	.0050 814	.0042 334
.0233 933	.0180 269	.0138 226	.0105 488	.0080 144	.0060 628
.0307 549	.0240 481	.0187 122	.0144 025 ⁻	.0111 245 ⁺	.0088 798
.0400 130	.0317 393	.0250 548	.0196 872	.0154 012	.0119 987
.0515 238	.0414 470	.0331 822	.0264 451	.0209 848	.0165 812
.0656 648	.0535 519	.0434 680	.0351 270	.0282 650 ⁺	.0226 541
.0828 285 ⁻	.0684 616	.0563 266	.0461 493	.0376 461	.0305 272
.1034 063	.0865 978	.0721 947	.0599 280	.0495 409	.0397 940
.1277 600	.1083 784	.0915 252	.0769 669	.0644 612	.0514 824
.1562 432	.1341 952	.1147 620	.0972 406	.0829 141	.0669 626
.1890 835 ⁻	.1643 866	.1423 160	.1222 154	.1053 060	.0862 095
.2264 420	.1992 057	.1745 326	.1523 185 ⁺	.1321 144	.1142 294
.2683 418	.2387 892	.2116 511	.1868 094	.1644 260	.1441 514
.3146 387	.2831 076	.2537 228	.2266 479	.2012 105 ⁺	.1782 684
.3650 051	.3319 625 ⁺	.3008 171	.2716 391	.2444 611	.2192 844
.4189 083	.3849 306	.3524 879	.3216 907	.2926 495 ⁺	.2684 868
.4756 053	.4413 619	.4081 261	.3762 169	.3455 615	.3184 868

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .43$ to 1.00 $q = 7.5$

	$p = 34$	$p = 35$	$p = 36$	$p = 37$	$p = 38$
$B(p, q) = .3119\ 6476 \times \frac{x}{108}$	$.2555\ 8559 \times \frac{x}{108}$	$.2104\ 8225 \times \frac{x}{108}$	$.1741\ 9221 \times \frac{x}{108}$	$.1448\ 3397 \times \frac{x}{108}$	
.43	.0000 001				
.44	.0000 002	.0000 001	.0000 001		
.45	.0000 004	.0000 002	.0000 001	.0000 001	
.46	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001
.47	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
.48	.0000 023	.0000 013	.0000 007	.0000 004	.0000 002
.49	.0000 042	.0000 024	.0000 014	.0000 008	.0000 005-
.50	.0000 074	.0000 044	.0000 026	.0000 015-	.0000 009
.51	.0000 128	.0000 077	.0000 046	.0000 027	.0000 016
.52	.0000 219	.0000 134	.0000 082	.0000 050-	.0000 030
.53	.0000 368	.0000 230	.0000 143	.0000 088	.0000 055-
.54	.0000 610	.0000 388	.0000 246	.0000 155+	.0000 097
.55	.0000 997	.0000 645+	.0000 416	.0000 267	.0000 171
.56	.0001 607	.0001 059	.0000 695+	.0000 455-	.0000 296
.57	.0002 555-	.0001 713	.0001 144	.0000 761	.0000 505-
.58	.0004 008	.0002 734	.0001 857	.0001 257	.0000 848
.59	.0006 207	.0004 305-	.0002 974	.0002 047	.0001 404
.60	.0009 488	.0006 688	.0004 697	.0003 287	.0002 292
.61	.0014 319	.0010 258	.0007 321	.0005 206	.0003 689
.62	.0021 341	.0015 532	.0011 262	.0008 136	.0005 857
.63	.0031 415-	.0023 220	.0017 099	.0012 547	.0009 175-
.64	.0045 677	.0034 280	.0025 631	.0019 096	.0014 179
.65	.0065 610	.0049 979	.0037 932	.0028 688	.0021 624
.66	.0093 104	.0071 969	.0055 430	.0042 543	.0032 543
.67	.0130 533	.0102 362	.0079 981	.0062 279	.0048 335-
.68	.0180 817	.0143 805-	.0113 963	.0090 006	.0070 854
.69	.0247 471	.0199 553	.0160 350-	.0128 415+	.0102 509
.70	.0334 634	.0273 517	.0222 791	.0180 871	.0146 372
.71	.0447 051	.0370 282	.0305 654	.0251 483	.0206 265-
.72	.0590 009	.0495 079	.0414 035+	.0345 148	.0286 836
.73	.0769 197	.0653 686	.0553 704	.0467 538	.0393 587
.74	.0990 479	.0852 252	.0730 967	.0625 011	.0532 830
.75	.1259 579	.1097 006	.0952 432	.0824 424	.0711 552
.76	.1581 653	.1393 868	.1224 646	.1072 817	.0937 155+
.77	.1960 777	.1747 934	.1553 609	.1376 962	.1217 048
.78	.2399 352	.2162 868	.1944 154	.1742 755-	.1558 066
.79	.2897 484	.2640 218	.2399 234	.2174 483	.1965 738
.80	.3452 376	.3178 724	.2919 144	.2673 986	.2443 405-
.81	.4057 840	.3773 683	.3500 771	.3239 798	.2991 275-
.82	.4703 985+	.4416 490	.4136 963	.3866 365-	.3605 494
.83	.5377 218	.5094 445-	.4816 156	.4543 472	.4277 383
.84	.6060 620	.5790 963	.5522 385+	.5256 045+	.4993 017
.85	.6734 781	.6486 271	.6235 809	.5984 477	.5733 315-
.86	.7379 095+	.7158 639	.6933 836	.6705 599	.6474 832
.87	.7703 158	.7486 112	.7262 851	.7041 355+	.6811 337

TABLES OF THE INCOMPLETE β -FUNCTION

0.100

$q = 7.5$

p

$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$= .1014\ 5052 \times \frac{1}{100}$	$.8543\ 2018 \times \frac{1}{100}$	$.7222\ 0881 \times \frac{1}{100}$	$.6127\ 8324 \times \frac{1}{100}$	$.5211\ 2507 \times \frac{1}{100}$	$.4451\ 9202 \times \frac{1}{100}$
.0000 001	.0000 001	.0000 001	.0000 001	.0000 001	.0000 001
.0000 001	.0000 002	.0000 001	.0000 001	.0000 001	.0000 001
.0000 003	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.0000 006	.0000 003	.0000 002	.0000 001	.0000 001	.0000 001
.0000 011	.0000 007	.0000 003	.0000 002	.0000 001	.0000 001
.0000 021	.0000 013	.0000 008	.0000 005	.0000 003	.0000 002
.0000 038	.0000 024	.0000 015	.0000 009	.0000 006	.0000 004
.0000 069	.0000 044	.0000 028	.0000 018	.0000 011	.0000 007
.0000 125	.0000 080	.0000 052	.0000 033	.0000 021	.0000 013
.0000 220	.0000 144	.0000 094	.0000 062	.0000 039	.0000 025
.0000 382	.0000 255	.0000 170	.0000 113	.0000 073	.0000 046
.0000 654	.0000 444	.0000 301	.0000 203	.0000 132	.0000 082
.0001 103	.0000 702	.0000 525	.0000 360	.0000 242	.0000 155
.0001 834	.0001 287	.0000 901	.0000 629	.0000 415	.0000 280
.0003 007	.0002 144	.0001 525	.0001 091	.0000 715	.0000 462
.0004 859	.0003 520	.0002 542	.0001 841	.0001 415	.0000 932
.0007 743	.0005 696	.0004 148	.0003 050	.0002 229	.0001 522
.0012 169	.0009 087	.0006 767	.0005 075	.0003 625	.0002 522
.0018 863	.0014 297	.0010 866	.0008 145	.0006 124	.0004 522
.0028 842	.0022 181	.0017 011	.0013 011	.0010 522	.0008 522
.0043 593	.0033 938	.0026 403	.0020 486	.0015 845	.0012 249
.0064 726	.0051 209	.0040 404	.0031 795	.0024 925	.0020 541
.0094 996	.0076 202	.0060 961	.0048 694	.0038 124	.0030 249
.0137 526	.0111 821	.0090 678	.0073 414	.0058 125	.0047 622
.0196 371	.0161 803	.0132 968	.0108 095	.0089 124	.0072 249
.0276 528	.0230 837	.0192 195	.0159 621	.0132 249	.0109 125
.0383 982	.0324 655	.0273 793	.0230 449	.0194 125	.0161 249
.0525 675	.0450 046	.0384 332	.0322 419	.0270 249	.0225 125
.0709 362	.0614 778	.0531 499	.0458 412	.0394 419	.0335 622
.0943 317	.0827 366	.0723 929	.0631 952	.0550 414	.0478 125
.1235 852	.1096 652	.0970 863	.0857 562	.0755 829	.0664 125
.1594 631	.1431 170	.1281 564	.1145 083	.1020 965	.0908 125
.2025 769	.1838 266	.1664 481	.1501 918	.1356 689	.1220 125
.2532 765	.2322 098	.2126 149	.1942 925	.1770 419	.1608 249
.3115 339	.2886 803	.2669 879	.2469 419	.2276 622	.2092 125
.3768 312	.3526 667	.3294 406	.3071 568	.2858 125	.2644 125
.4480 717	.4233 113	.3992 154	.3758 124	.3532 125	.3304 125
.5235 387	.4990 409	.4749 166	.4512 124	.4279 622	.4044 125
.6009 246	.5776 123	.5543 864	.5311 158	.5078 125	.4844 125
.6774 527	.6562 187	.6348 164	.6133 148	.5917 622	.5694 125
.7591 018	.7317 004	.7129 399	.6938 256	.6745 124	.6550 125
.8159 238	.8008 671	.7853 421	.7693 865	.7539 124	.7384 125
.8724 212	.8609 030	.8488 931	.8364 114	.8244 249	.8119 125

$x = .53$ to 1.00 $q = 7.5$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .3821\ 0490 \times \frac{x}{10^6}$		$.3285\ 3880 \times \frac{x}{10^6}$	$.2833\ 2703 \times \frac{x}{10^6}$	$.2450\ 39$
.53	.0000 001	.0000 001		
.54	.0000 002	.0000 001	.0000 001	
.55	.0000 004	.0000 003	.0000 002	.0000 00
.56	.0000 009	.0000 005 ⁺	.0000 003	.0000 00
.57	.0000 017	.0000 011	.0000 007	.0000 00
.58	.0000 033	.0000 021	.0000 014	.0000 00
.59	.0000 062	.0000 041	.0000 027	.0000 01
.60	.0000 115 ⁻	.0000 078	.0000 053	.0000 03
.61	.0000 210	.0000 145 ⁺	.0000 100	.0000 06
.62	.0000 379	.0000 266	.0000 187	.0000 13
.63	.0000 674	.0000 480	.0000 342	.0000 24
.64	.0001 178	.0000 853	.0000 616	.0000 44
.65	.0002 027	.0001 490	.0001 093	.0000 80
.66	.0003 435 ⁺	.0002 564	.0001 909	.0001 41
.67	.0005 734	.0004 343	.0003 282	.0002 47
.68	.0009 427	.0007 244	.0005 554	.0004 24
.69	.0015 265 ⁺	.0011 897	.0009 252	.0007 18
.70	.0024 347	.0019 243	.0015 175 ⁻	.0011 94
.71	.0038 248	.0030 646	.0024 502	.0019 54
.72	.0059 174	.0048 055 ⁺	.0038 943	.0031 49
.73	.0090 151	.0074 187	.0060 922	.0049 92
.74	.0135 229	.0112 737	.0093 792	.0077 87
.75	.0199 681	.0168 604	.0142 074	.0119 48
.76	.0290 180	.0248 101	.0211 698	.0180 28
.77	.0414 897	.0359 103	.0310 199	.0267 44
.78	.0583 456	.0511 082	.0446 823	.0389 91
.79	.0806 680	.0714 942	.0632 446	.0558 44
.80	.1096 047	.0982 566	.0879 226	.0785 35
.81	.1462 774	.1325 994	.1199 880	.1083 89
.82	.1916 494	.1756 155 ⁻	.1606 493	.1467 15
.83	.2463 555 ⁺	.2281 158	.2108 831	.1946 43
.84	.3105 039	.2904 219	.2712 201	.2529 06
.85	.3834 753	.3621 442	.3415 051	.3215 86
.86	.4637 584	.4419 838	.4206 680	.3998 53
.87	.5488 692	.5276 113	.5065 592	.4857 63
.88	.6354 131	.6156 833	.5959 200	.5761 73
.89	.7193 332	.7020 572	.6845 550 ⁺	.6668 68
.90	.7963 635 ⁺	.7822 312	.7677 530	.7529 58
.91	.8626 520	.8519 914	.8409 486	.8295 38
.92	.9154 495 ⁺	.9081 638	.9005 339	.8925 63
.93	.9536 898	.9492 892	.9446 307	.9397 11
.94	.9782 514	.9759 864	.9735 628	.9709 76
.95	.9917 283	.9907 894	.9897 741	.9886 78
.96	.9976 837	.9973 986	.9970 871	.9967 47
.97	.9996 004	.9995 473	.9994 887	.9994 24
.98	.9999 715 ⁺	.9999 675 ⁻	.9999 629	.9999 57
.99	.9999 998	.9999 997	.9999 997	.9999 99
1.00	1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

0.70

$q = 8$

$p = 8$ to

$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$
$\cdot 1942\ 5019 \times \frac{1}{10^4}$	$\cdot 1362\ 8793 \times \frac{1}{10^4}$	$\cdot 9712\ 5097 \times \frac{1}{10^5}$	$\cdot 7020\ 8932 \times \frac{1}{10^5}$	$\cdot 5141\ 9169 \times \frac{1}{10^5}$	$\cdot 3811\ 3420 \times \frac{1}{10^5}$
$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 0000\ 007$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 024$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 0000\ 065^-$	$\cdot 0000\ 024$	$\cdot 0000\ 009$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 0000\ 155^-$	$\cdot 0000\ 062$	$\cdot 0000\ 025^-$	$\cdot 0000\ 010$	$\cdot 0000\ 004$	$\cdot 0000\ 001$
$\cdot 0000\ 336$	$\cdot 0000\ 142$	$\cdot 0000\ 059$	$\cdot 0000\ 024$	$\cdot 0000\ 010$	$\cdot 0000\ 004$
$\cdot 0000\ 673$	$\cdot 0000\ 298$	$\cdot 0000\ 130$	$\cdot 0000\ 056$	$\cdot 0000\ 024$	$\cdot 0000\ 010$
$\cdot 0001\ 261$	$\cdot 0000\ 583$	$\cdot 0000\ 266$	$\cdot 0000\ 120$	$\cdot 0000\ 054$	$\cdot 0000\ 024$
$\cdot 0002\ 233$	$\cdot 0001\ 073$	$\cdot 0000\ 510$	$\cdot 0000\ 240$	$\cdot 0000\ 112$	$\cdot 0000\ 051$
$\cdot 0003\ 767$	$\cdot 0001\ 877$	$\cdot 0000\ 925^-$	$\cdot 0000\ 451$	$\cdot 0000\ 218$	$\cdot 0000\ 104$
$\cdot 0006\ 096$	$\cdot 0003\ 143$	$\cdot 0001\ 602$	$\cdot 0000\ 808$	$\cdot 0000\ 404$	$\cdot 0000\ 200$
$\cdot 0009\ 515^-$	$\cdot 0005\ 063$	$\cdot 0002\ 664$	$\cdot 0001\ 387$	$\cdot 0000\ 715^+$	$\cdot 0000\ 366$
$\cdot 0014\ 384$	$\cdot 0007\ 884$	$\cdot 0004\ 274$	$\cdot 0002\ 292$	$\cdot 0001\ 218$	$\cdot 0000\ 641$
$\cdot 0021\ 136$	$\cdot 0011\ 913$	$\cdot 0006\ 640$	$\cdot 0003\ 663$	$\cdot 0002\ 002$	$\cdot 0001\ 084$
$\cdot 0030\ 279$	$\cdot 0017\ 522$	$\cdot 0010\ 028$	$\cdot 0005\ 680$	$\cdot 0003\ 187$	$\cdot 0001\ 773$
$\cdot 0042\ 397$	$\cdot 0025\ 153$	$\cdot 0014\ 759$	$\cdot 0008\ 573$	$\cdot 0004\ 932$	$\cdot 0002\ 813$
$\cdot 0058\ 149$	$\cdot 0035\ 323$	$\cdot 0021\ 224$	$\cdot 0012\ 624$	$\cdot 0007\ 439$	$\cdot 0004\ 345^+$
$\cdot 0078\ 264$	$\cdot 0048\ 622$	$\cdot 0029\ 881$	$\cdot 0018\ 180$	$\cdot 0010\ 959$	$\cdot 0006\ 548$
$\cdot 0103\ 536$	$\cdot 0065\ 715^-$	$\cdot 0041\ 263$	$\cdot 0025\ 652$	$\cdot 0015\ 800$	$\cdot 0009\ 649$
$\cdot 0134\ 815^+$	$\cdot 0087\ 335^-$	$\cdot 0055\ 975^+$	$\cdot 0035\ 523$	$\cdot 0022\ 337$	$\cdot 0013\ 925^+$
$\cdot 0172\ 998$	$\cdot 0114\ 280$	$\cdot 0074\ 697$	$\cdot 0048\ 347$	$\cdot 0031\ 008$	$\cdot 0019\ 718$
$\cdot 0219\ 012$	$\cdot 0147\ 407$	$\cdot 0098\ 178$	$\cdot 0064\ 756$	$\cdot 0042\ 326$	$\cdot 0027\ 432$
$\cdot 0273\ 800$	$\cdot 0187\ 616$	$\cdot 0127\ 231$	$\cdot 0085\ 452$	$\cdot 0056\ 878$	$\cdot 0037\ 542$
$\cdot 0338\ 305^-$	$\cdot 0235\ 840$	$\cdot 0162\ 726$	$\cdot 0111\ 208$	$\cdot 0075\ 326$	$\cdot 0050\ 598$
$\cdot 0413\ 451$	$\cdot 0293\ 030$	$\cdot 0205\ 578$	$\cdot 0142\ 864$	$\cdot 0098\ 407$	$\cdot 0067\ 227$
$\cdot 0500\ 125^+$	$\cdot 0360\ 140$	$\cdot 0256\ 735^+$	$\cdot 0181\ 310$	$\cdot 0126\ 927$	$\cdot 0088\ 131$
$\cdot 0599\ 156$	$\cdot 0438\ 104$	$\cdot 0317\ 165^+$	$\cdot 0227\ 488$	$\cdot 0161\ 757$	$\cdot 0114\ 088$
$\cdot 0711\ 294$	$\cdot 0527\ 821$	$\cdot 0387\ 834$	$\cdot 0282\ 367$	$\cdot 0203\ 822$	$\cdot 0145\ 947$
$\cdot 0837\ 194$	$\cdot 0630\ 134$	$\cdot 0469\ 693$	$\cdot 0346\ 936$	$\cdot 0254\ 092$	$\cdot 0184\ 618$
$\cdot 0977\ 397$	$\cdot 0745\ 808$	$\cdot 0563\ 653$	$\cdot 0422\ 180$	$\cdot 0313\ 568$	$\cdot 0231\ 069$
$\cdot 1132\ 311$	$\cdot 0875\ 511$	$\cdot 0670\ 569$	$\cdot 0509\ 066$	$\cdot 0383\ 263$	$\cdot 0286\ 306$
$\cdot 1302\ 201$	$\cdot 1019\ 798$	$\cdot 0791\ 215^+$	$\cdot 0608\ 521$	$\cdot 0404\ 185^-$	$\cdot 0351\ 364$
$\cdot 1487\ 170$	$\cdot 1179\ 087$	$\cdot 0926\ 268$	$\cdot 0721\ 406$	$\cdot 0557\ 319$	$\cdot 0427\ 286$
$\cdot 1687\ 154$	$\cdot 1353\ 649$	$\cdot 1076\ 281$	$\cdot 0848\ 502$	$\cdot 0663\ 602$	$\cdot 0515\ 105^-$
$\cdot 1901\ 914$	$\cdot 1543\ 589$	$\cdot 1241\ 671$	$\cdot 0990\ 479$	$\cdot 0783\ 902$	$\cdot 0615\ 820$
$\cdot 2131\ 032$	$\cdot 1748\ 841$	$\cdot 1422\ 697$	$\cdot 1147\ 883$	$\cdot 0918\ 993$	$\cdot 0730\ 376$
$\cdot 2373\ 908$	$\cdot 1969\ 153$	$\cdot 1619\ 449$	$\cdot 1321\ 111$	$\cdot 1069\ 532$	$\cdot 0859\ 638$
$\cdot 2629\ 766$	$\cdot 2204\ 087$	$\cdot 1831\ 832$	$\cdot 1510\ 395^-$	$\cdot 1236\ 042$	$\cdot 1004\ 365^-$
$\cdot 2897\ 659$	$\cdot 2453\ 016$	$\cdot 2059\ 560$	$\cdot 1715\ 783$	$\cdot 1418\ 880$	$\cdot 1165\ 187$
$\cdot 3176\ 477$	$\cdot 2715\ 125^-$	$\cdot 2302\ 149$	$\cdot 1937\ 132$	$\cdot 1618\ 231$	$\cdot 1342\ 582$
$\cdot 3464\ 961$	$\cdot 2989\ 419$	$\cdot 2558\ 915^-$	$\cdot 2174\ 092$	$\cdot 1834\ 078$	$\cdot 1536\ 850^+$
$\cdot 3761\ 718$	$\cdot 3274\ 731$	$\cdot 2828\ 977$	$\cdot 2426\ 106$	$\cdot 2066\ 202$	$\cdot 1748\ 100$
$\cdot 4065\ 240$	$\cdot 3569\ 733$	$\cdot 3111\ 262$	$\cdot 2692\ 404$	$\cdot 2314\ 160$	$\cdot 1976\ 227$
$\cdot 4373\ 921$	$\cdot 3872\ 958$	$\cdot 3404\ 517$	$\cdot 2972\ 007$	$\cdot 2577\ 291$	$\cdot 2220\ 899$
$\cdot 4686\ 084$	$\cdot 4182\ 812$	$\cdot 3707\ 310$	$\cdot 3262\ 325^+$		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 8$

	$p = 8$	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$
$B(p, q) = .1942\ 5019 \times \frac{1}{10^4}$	$.1362\ 8793 \times \frac{1}{10^4}$	$.9712\ 5097 \times \frac{1}{10^3}$	$.7020\ 8932 \times \frac{1}{10^3}$	$.5141\ 9169$	
$.71$	.9586 549	.9489 321	.9378 675 ⁺	.9254 355 ⁺	.9116 293
$.72$	.9661 695 ⁺	.9579 879	.9486 116	.9380 024	.9261 375 ⁺
$.73$	.9726 200	.9658 154	.9579 632	.9490 166	.9389 418
$.74$	.9780 988	.9725 095 ⁻	.9660 154	.9585 657	.9501 190
$.75$	.9827 002	.9781 696	.9728 700	.9667 496	.9597 632
$.76$	.9865 185 ⁻	.9828 978	.9786 345 ⁻	.9736 779	.9679 823
$.77$	.9896 464	.9867 968	.9834 192	.9794 665 ⁺	.9748 947
$.78$	.9921 736	.9899 674	.9873 354	.9842 353	.9806 264
$.79$	.9941 851	.9925 071	.9904 926	.9881 046	.9853 067
$.80$	.9957 603	.9945 086	.9929 964	.9911 925 ⁺	.9890 657
$.81$	.9969 721	.9960 581	.9949 469	.9936 131	.9920 307
$.82$	.9978 864	.9972 344	.9964 368	.9954 735 ⁺	.9943 237
$.83$	.9985 616	.9981 084	.9975 506	.9968 728	.9960 588
$.84$	.9990 485 ⁺	.9987 424	.9983 634	.9979 001	.9973 404
$.85$	.9993 904	.9991 903	.9989 410	.9986 345 ⁻	.9982 619
$.86$	.9996 233	.9994 972	.9993 392	.9991 437	.9989 047
$.87$	.9997 767	.9997 005 ⁺	.9996 045 ⁻	.9994 849	.9993 380
$.88$	.9998 739	.9998 300	.9997 744	.9997 048	.9996 187
$.89$	.9999 327	.9999 088	.9998 784	.9998 401	.9997 924
$.90$	.9999 664	.9999 542	.9999 387	.9999 190	.9998 944
$.91$	.9999 845 ⁺	.9999 788	.9999 715 ⁻	.9999 622	.9999 504
$.92$	.9999 935 ⁺	.9999 911	.9999 880	.9999 840	.9999 789
$.93$	.9999 976	.9999 967	.9999 956	.9999 940	.9999 921
$.94$	.9999 993	.9999 990	.9999 986	.9999 981	.9999 975 ⁺
$.95$	.9999 998	.9999 997	.9999 997	.9999 995 ⁺	.9999 994
$.96$	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 999
$.97$			1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

9 to 70

$q = 8$

$p = 11$

$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$
$q) = .2856\ 6205 \times \frac{1}{10^8}$	$.1653\ 8329 \times \frac{1}{10^8}$	$.9922\ 9975 \times \frac{1}{10^8}$	$.6142\ 8080 \times \frac{1}{10^8}$	$.3909\ 0596 \times \frac{1}{10^8}$	$.2549\ 3867 \times \frac{1}{10^8}$
.0000 001					
.0000 002					
.0000 004	.0000 001				
.0000 010	.0000 002				
.0000 024	.0000 005-	.0000 001			
.0000 049	.0000 011	.0000 002			
.0000 098	.0000 023	.0000 005+			
.0000 185+	.0000 047	.0000 011	.0000 001		
.0000 335-	.0000 089	.0000 023	.0000 003	.0000 001	
.0000 582	.0000 164	.0000 045+	.0000 006	.0000 001	
.0000 978	.0000 291	.0000 084	.0000 012	.0000 003	.0000 001
.0001 591	.0000 498	.0000 152	.0000 024	.0000 007	.0000 002
			.0000 045+	.0000 013	.0000 004
.0002 518	.0000 826	.0000 264	.0000 082	.0000 025+	.0000 008
.0003 881	.0001 334	.0000 446	.0000 146	.0000 047	.0000 015-
.0005 845-	.0002 098	.0000 733	.0000 250+	.0000 084	.0000 027
.0008 612	.0003 222	.0001 174	.0000 418	.0000 146	.0000 050-
.0012 440	.0004 844	.0001 837	.0000 681	.0000 247	.0000 088
.0017 639	.0007 136	.0002 812	.0001 083	.0000 408	.0000 151
.0024 586	.0010 319	.0004 219	.0001 686	.0000 660	.0000 253
.0033 724	.0014 663	.0006 212	.0002 572	.0001 043	.0000 415+
.0045 572	.0020 500-	.0008 987	.0003 851	.0001 616	.0000 666
.0060 725+	.0028 226	.0012 789	.0005 664	.0002 458	.0001 047
.0079 857	.0038 311	.0017 919	.0008 194	.0003 671	.0001 615+
.0103 719	.0051 302	.0024 744	.0011 669	.0005 393	.0002 447
.0133 140	.0067 826	.0033 700	.0016 374	.0007 798	.0003 047
.0169 019	.0088 597	.0045 303	.0022 657	.0011 108	.0005 348
.0212 315+	.0114 409	.0060 153	.0030 938	.0015 600	.0007 726
.0264 042	.0146 140	.0078 936	.0041 715-	.0021 616	.0011 003
.0325 250+	.0184 743	.0102 430	.0055 574	.0029 569	.0015 457
.0397 012	.0231 241	.0131 503	.0073 194	.0039 958	.0021 434
.0480 401	.0286 713	.0167 110	.0095 348	.0053 368	.0029 355-
.0576 473	.0352 279	.0210 289	.0122 911	.0070 484	.0039 727
.0686 241	.0429 087	.0262 151	.0156 853	.0092 095-	.0053 153
.0810 647	.0518 285+	.0323 865-	.0198 239	.0119 095-	.0070 342
.0950 544	.0621 005-	.0396 644	.0248 220	.0152 487	.0092 111
.1106 660	.0738 328	.0481 724	.0308 023	.0193 380	.0119 398
.1279 578	.0871 264	.0580 341	.0378 932	.0242 982	.0153 254
.1469 711	.1020 717	.0693 699	.0462 271	.0302 586	.0194 852
.1677 276	.1187 454	.0822 945+	.0559 377	.0373 562	.0245 473
.1902 275+	.1372 081	.0969 133	.0671 571	.0457 327	.0306 499
.2144 478	.1575 005+	.1133 189	.0800 128	.0555 328	.0379 398
.2403 412	.1796 417	.1315 880	.0946 236	.0669 003	.0465 698
.2678 349	.2036 260	.1517 773	.1110 960	.0799 748	.0566 961
.2968 307	.2294 211	.1730 206			

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.98$ $q = 8$

	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .2856\ 6205 \times \frac{1}{10^8}$	$.1653\ 8329 \times \frac{1}{10^8}$	$.9922\ 9975 \times \frac{1}{10^8}$	$.6142\ 8080 \times \frac{1}{10^8}$	$.3909\ 059$	
$.71$	.8799 597	.8431 654	.8018 024	.7566 214	.7085 030
$.72$	.8986 292	.8662 194	.8292 722	.7883 461	.7441 450
$.73$	.9153 363	.8871 384	.8545 463	.8179 430	.7778 620
$.74$	.9301 214	.9059 060	.8775 337	.8452 330	.8093 791
$.75$	.9430 520	.9225 428	.8981 881	.8700 866	.8384 724
$.76$	.9542 197	.9371 040	.9165 081	.8924 268	.8649 741
$.77$	.9637 363	.9496 766	.9325 355	.9122 299	.8887 769
$.78$	.9717 302	.9603 755	.9463 524	.9295 247	.9098 363
$.79$	.9783 420	.9693 386	.9580 769	.9443 895	.9281 699
$.80$	.9837 199	.9767 217	.9678 573	.9569 474	.9438 554
$.81$	.9880 151	.9826 925 ⁺	.9758 664	.9673 599	.9570 246
$.82$	.9913 779	.9874 253	.9822 935	.9758 194	.9678 564
$.83$	.9939 538	.9910 948	.9873 377	.9825 401	.9765 672
$.84$	.9958 795	.9938 713	.9912 006	.9877 491	.9834 002
$.85$	.9972 806	.9959 157	.9940 789	.9916 768	.9886 141
$.86$	.9982 696	.9973 757	.9961 586	.9945 483	.9924 709
$.87$	.9989 439	.9983 828	.9976 099	.9965 755	.9952 255
$.88$	.9993 858	.9990 504	.9985 832	.9979 506	.9971 155
$.89$	.9996 625	.9994 731	.9992 064	.9988 411	.9983 534
$.90$	.9998 265 ⁺	.9997 267	.9995 844	.9993 873	.9991 213
$.91$	.9999 178	.9998 693	.9997 993	.9997 014	.9995 677
$.92$	.9999 648	.9999 434	.9999 124	.9998 684	.9998 077
$.93$	.9999 867	.9999 784	.9999 663	.9999 489	.9999 246
$.94$	.9999 957	.9999 930	.9999 890	.9999 832	.9999 750
$.95$	.9999 989	.9999 982	.9999 971	.9999 956	.9999 934
$.96$	.9999 998	.9999 997	.9999 995	.9999 987	.9999 987
$.97$	I·0000 000	I·0000 000	.9999 999	.9999 999	.9999 999
$.98$			I·0000 000	I·0000 000	I·0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

0.80

$q = 8$

$p = 17$ to

$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$= .1699\ 5911 \times \frac{1}{10^6}$	$.1155\ 7220 \times \frac{1}{10^6}$	$.8001\ 1522 \times \frac{1}{10^7}$	$.5630\ 4404 \times \frac{1}{10^7}$	$.4021\ 7432 \times \frac{1}{10^7}$	$.2912\ 2968 \times \frac{1}{10^7}$
.0000 001					
.0000 002	.0000 001				
.0000 005-	.0000 001				
.0000 009	.0000 003	.0000 001			
.0000 017	.0000 006	.0000 002	.0000 001		
.0000 031	.0000 011	.0000 004	.0000 001		
.0000 055-	.0000 020	.0000 007	.0000 002	.0000 001	
.0000 096	.0000 036	.0000 013	.0000 005-	.0000 002	.0000 001
.0000 163	.0000 063	.0000 024	.0000 009	.0000 003	.0000 001
.0000 270	.0000 108	.0000 042	.0000 016	.0000 006	.0000 002
.0000 439	.0000 181	.0000 074	.0000 030	.0000 012	.0000 005-
.0000 699	.0000 298	.0000 125+	.0000 052	.0000 021	.0000 009
.0001 093	.0000 480	.0000 208	.0000 089	.0000 038	.0000 016
.0001 678	.0000 760	.0000 340	.0000 150+	.0000 065+	.0000 028
.0002 534	.0001 182	.0000 544	.0000 247	.0000 111	.0000 049
.0003 765+	.0001 808	.0000 856	.0000 401	.0000 185+	.0000 085-
.0005 511	.0002 720	.0001 325-	.0000 637	.0000 303	.0000 142
.0007 952	.0004 031	.0002 016	.0000 996	.0000 487	.0000 235+
.0011 316	.0005 887	.0003 023	.0001 533	.0000 769	.0000 381
.0015 893	.0008 480	.0004 466	.0002 323	.0001 195-	.0000 608
.0022 041	.0012 054	.0006 506	.0003 469	.0001 829	.0000 954
.0030 202	.0016 918	.0009 353	.0005 109	.0002 759	.0001 475+
.0040 907	.0023 454	.0013 274	.0007 422	.0004 104	.0002 247
.0054 792	.0032 136	.0018 606	.0010 645-	.0006 023	.0003 373
.0072 603	.0043 536	.0025 773	.0015 077	.0008 724	.0004 997
.0095 212	.0058 338	.0035 291	.0021 100	.0012 478	.0007 305+
.0123 612	.0077 349	.0047 792	.0029 186	.0017 632	.0010 545+
.0158 933	.0101 511	.0064 027	.0039 919	.0024 623	.0015 037
.0202 428	.0131 904	.0084 889	.0054 007	.0033 995+	.0021 188
.0255 478	.0169 754	.0111 414	.0072 296	.0046 419	.0029 513
.0319 573	.0216 426	.0144 796	.0095 786	.0062 705-	.0040 650+
.0396 300	.0273 423	.0186 386	.0125 643	.0083 822	.0055 383
.0487 312	.0342 371	.0237 690	.0163 202	.0110 912	.0074 657
.0594 303	.0424 994	.0300 364	.0209 975-	.0145 301	.0099 598
.0718 963	.0523 095-	.0376 194	.0267 642	.0188 508	.0131 531
.0862 933	.0638 508	.0467 071	.0338 043	.0242 240	.0171 984
.1027 756	.0773 058	.0574 960	.0423 155-	.0308 390	.0222 698
.1214 810	.0928 507	.0701 850-	.0525 057	.0389 015+	.0285 623
.1425 255+	.1106 486	.0849 699	.0645 892	.0486 311	.0362 901
.1659 963	.1308 433	.1020 375-	.0787 805-	.0602 563	.0456 840
.1919 452	.1535 517	.1215 571	.0952 879	.0740 098	.0569 873
.2203 832	.1788 562	.1436 736	.1143 054	.0901 207	.0704 504
.2512 742	.2067 973	.1684 978	.1360 037	.1088 061	.0863 228
.2845 308	.2373 660	.1960 084	.1605 227		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.99$ $q = 8$

	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$B(p, q) = .1699\ 5911 \times \frac{1}{10^6}$	$.1155\ 7220 \times \frac{1}{10^6}$	$.8001\ 1522 \times \frac{1}{10^7}$	$.5630\ 4404 \times \frac{1}{10^7}$	$.4021\ 743$	
x					
.81	.9304 496	.9141 010	.8957 088	.8753 226	.8530 302
.82	.9469 908	.9339 224	.9190 389	.9023 381	.8838 503
.83	.9606 208	.9504 554	.9387 369	.9254 272	.9105 136
.84	.9715 729	.9639 008	.9549 500 ⁺	.9446 613	.9329 940
.85	.9801 307	.9745 324	.9679 232	.9602 358	.9514 144
.86	.9866 115 ⁻	.9826 786	.9779 811	.9724 528	.9660 345
.87	.9913 487	.9887 028	.9855 056	.9816 993	.9772 287
.88	.9946 744	.9929 806	.9909 104	.9884 174	.9854 558
.89	.9969 025 ⁺	.9958 793	.9946 144	.9930 740	.9912 231
.90	.9983 159	.9977 387	.9970 172	.9961 286	.9950 490
.91	.9991 560	.9988 561	.9984 772	.9980 053	.9974 257
.92	.9996 174	.9994 767	.9992 969	.9990 705 ⁺	.9987 894
.93	.9998 473	.9997 892	.9997 141	.9996 186	.9994 987
.94	.9999 483	.9999 280	.9999 015 ⁺	.9998 674	.9998 242
.95	.9999 861	.9999 804	.9999 730	.9999 633	.9999 508
.96	.9999 973	.9999 962	.9999 947	.9999 927	.9999 901
.97	.9999 997	.9999 996	.9999 994	.9999 991	.9999 988
.98	1.0000 000	1.0000 000	1.0000 000	1.0000 000	.9999 999
.99					1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$q = 8$ $p = 2$

$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$
$\beta_1(q) = .2135\ 6843 \times \frac{1}{10^5}$	$.1584\ 5400 \times \frac{1}{10^5}$	$.1188\ 4050 \times \frac{1}{10^5}$	$.9003\ 0680 \times \frac{1}{10^5}$	$.6884\ 6990 \times \frac{1}{10^5}$	$.5311\ 0535$
.29 .0000 001					
.30 .0000 002	.0000 001				
.31 .0000 003	.0000 001	.0000 001			
.32 .0000 007	.0000 003	.0000 001			
.33 .0000 012	.0000 005 ⁺	.0000 002	.0000 001		
.34 .0000 022	.0000 010	.0000 004	.0000 002	.0000 001	
.35 .0000 038	.0000 017	.0000 008	.0000 003	.0000 001	.0000 001
.36 .0000 066	.0000 031	.0000 014	.0000 006	.0000 003	.0000 001
.37 .0000 113	.0000 053	.0000 025 ⁺	.0000 012	.0000 005 ⁺	.0000 002
.38 .0000 187	.0000 091	.0000 044	.0000 021	.0000 010	.0000 005 ⁻
.39 .0000 307	.0000 153	.0000 076	.0000 037	.0000 018	.0000 009
.40 .0000 493	.0000 253	.0000 128	.0000 065 ⁻	.0000 032	.0000 016
.41 .0000 781	.0000 410	.0000 213	.0000 110	.0000 056	.0000 029
.42 .0001 218	.0000 654	.0000 349	.0000 184	.0000 097	.0000 050 ⁺
.43 .0001 871	.0001 029	.0000 561	.0000 304	.0000 163	.0000 087
.44 .0002 835 ⁺	.0001 595 ⁻	.0000 889	.0000 492	.0000 271	.0000 148
.45 .0004 237	.0002 436	.0001 389	.0000 786	.0000 442	.0000 246
.46 .0006 248	.0003 670	.0002 138	.0001 236	.0000 710	.0000 405 ⁻
.47 .0009 098	.0005 457	.0003 247	.0001 917	.0001 124	.0000 655 ⁻
.48 .0013 084	.0008 011	.0004 865 ⁺	.0002 933	.0001 755 ⁺	.0001 044
.49 .0018 593	.0011 614	.0007 197	.0004 426	.0002 703	.0001 640
.50 .0026 114	.0016 634	.0010 512	.0006 594	.0004 107	.0002 541
.51 .0036 264	.0023 546	.0015 168	.0009 699	.0006 159	.0003 886
.52 .0049 806	.0032 950 ⁺	.0021 629	.0014 093	.0009 120	.0005 863
.53 .0067 669	.0045 596	.0030 485 ⁻	.0020 234	.0013 338	.0008 735 ⁺
.54 .0090 974	.0062 407	.0042 482	.0028 710	.0019 271	.0012 852
.55 .0121 048	.0084 507	.0058 548	.0040 273	.0027 516	.0018 680
.56 .0159 443	.0113 238	.0079 817	.0055 861	.0038 834	.0026 827
.57 .0207 939	.0150 182	.0107 658	.0076 633	.0054 187	.0038 076
.58 .0268 549	.0197 169	.0143 694	.0103 994	.0074 769	.0053 424
.59 .0343 597	.0256 289	.0189 823	.0139 627	.0102 038	.0074 111
.60 .0435 241	.0329 877	.0248 219	.0185 507	.0137 748	.0101 664
.61 .0546 337	.0420 492	.0321 336	.0243 915 ⁺	.0183 973	.0137 929
.62 .0679 478	.0530 880	.0411 878	.0317 438	.0243 120	.0185 098
.63 .0837 364	.0663 911	.0522 764	.0408 943	.0317 930	.0245 726
.64 .1022 621	.0822 499	.0657 065 ⁻	.0521 541	.0411 454	.0322 733
.65 .1237 678	.1009 493	.0817 913	.0658 518	.0527 017	.0419 382
.66 .1484 637	.1227 552	.1008 387	.0823 236	.0668 137	.0539 232
.67 .1765 128	.1478 996	.1231 372	.1019 010	.0838 420	.0686 056
.68 .2080 152	.1765 638	.1489 390	.1248 943	.1041 420	.0863 718
.69 .2429 931	.2088 614	.1784 415 ⁺	.1515 747	.1280 456	.1076 014
.70 .2813 767	.2448 206	.2117 678	.1821 524	.1558 404	.1326 467
.71 .3229 920	.2843 677	.2489 459	.2167 546	.1877 454	.1618 080
.72 .3675 521	.3273 131	.2808 000	.2555 555 ⁺		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .91$ to $.99$ $q = 8$

	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$
$B(p, q) = .2135\ 6843 \times \frac{1}{10^7}$	$.1584\ 5400 \times \frac{1}{10^7}$	$.1188\ 4050 \times \frac{1}{10^7}$	$.9003\ 0680 \times \frac{1}{10^8}$	$.6884\ 69$	
x					
.91	.9958 786	.9948 771	.9937 000	.9923 289	.9907 45
.92	.9980 264	.9975 245 ⁺	.9969 281	.9962 259	.9954 03
.93	.9991 677	.9989 466	.9986 810	.9983 648	.9979 91
.94	.9997 027	.9996 203	.9995 203	.9993 999	.9992 50
.95	.9999 154	.9998 909	.9998 609	.9998 244	.9997 80
.96	.9999 826	.9999 774	.9999 709	.9999 630	.9999 53
.97	.9999 979	.9999 972	.9999 964	.9999 954	.9999 94
.98	.9999 999	.9999 999	.9999 998	.9999 998	.9999 99
.99	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION $x = .48$ to $.99$ $q = 8$ $p = .41$ to $.45$

	$p = .41$	$p = .42$	$p = .43$	$p = .44$	$p = .45$
$B(p, q) = .3312\ 5834 \times \frac{1}{10^9}$	$.2771\ 7534 \times \frac{1}{10^9}$	$.2328\ 2729 \times \frac{1}{10^9}$	$.1963\ 0536 \times \frac{1}{10^9}$	$.1661\ 0454 \times \frac{1}{10^9}$	
x					
.48	.0000 001				
.49	.0000 002	.0000 001			
.50	.0000 003	.0000 002	.0000 001	.0000 001	
.51	.0000 006	.0000 004	.0000 002	.0000 001	.0000 001
.52	.0000 012	.0000 007	.0000 004	.0000 003	.0000 002
.53	.0000 023	.0000 014	.0000 009	.0000 005 ⁺	.0000 003
.54	.0000 042	.0000 026	.0000 017	.0000 010	.0000 006
.55	.0000 077	.0000 049	.0000 031	.0000 020	.0000 013
.56	.0000 140	.0000 091	.0000 059	.0000 038	.0000 024
.57	.0000 249	.0000 164	.0000 108	.0000 071	.0000 047
.58	.0000 435 ⁻	.0000 292	.0000 196	.0000 131	.0000 087
.59	.0000 749	.0000 512	.0000 349	.0000 237	.0000 161
.60	.0001 270	.0000 883	.0000 612	.0000 423	.0000 292
.61	.0002 121	.0001 499	.0001 056	.0000 742	.0000 520
.62	.0003 492	.0002 507	.0001 794	.0001 281	.0000 912
.63	.0005 603	.0004 129	.0003 002	.0002 177	.0001 574
.64	.0009 051	.0006 702	.0004 949	.0003 644	.0002 675 ⁺
.65	.0014 261	.0010 720	.0008 036	.0006 006	.0004 478
.66	.0022 148	.0016 898	.0012 855 ⁺	.0009 753	.0007 379
.67	.0033 911	.0026 251	.0020 264	.0015 599	.0011 976
.68	.0051 188	.0040 195 ⁻	.0031 474	.0024 578	.0019 143
.69	.0076 175 ⁻	.0060 660	.0048 170	.0038 149	.0030 135 ⁻
.70	.0111 754	.0090 225 ⁻	.0072 642	.0058 331	.0046 719
.71	.0161 623	.0132 259	.0107 935 ⁻	.0087 854	.0071 328
.72	.0230 405 ⁻	.0191 055 ⁻	.0158 000	.0130 327	.0107 233
.73	.0323 724	.0271 940	.0227 837	.0190 401	.0158 725 ⁺
.74	.0448 219	.0381 333	.0323 588	.0273 900	.0231 282
.75	.0611 443	.0526 705 ⁻	.0452 558	.0387 896	.0331 684
.76	.0821 634	.0716 414	.0623 119	.0540 673	.0468 045 ⁺
.77	.1087 294	.0959 359	.0844 430	.0741 528	.0649 689
.78	.1416 576	.1264 413	.1125 945 ⁻	.1000 357	.0886 814
.79	.1816 437	.1639 624	.1476 661	.1326 963	.1189 887
.80	.2291 610	.2091 173	.1904 098	.1730 075 ⁻	.1568 708
.81	.2843 446	.2622 155 ⁻	.2413 035 ⁻	.2216 073	.2031 152
.82	.3468 747	.3231 283	.3004 109	.2787 502	.2581 626
.83	.4158 776	.3911 693	.3672 435 ⁻	.3441 523	.3219 374
.84	.4898 662	.4650 086	.4406 481	.4168 542	.3936 875 ⁻
.85	.5667 445 ⁻	.5426 479	.5187 521	.4951 342	.4718 652
.86	.6438 982	.6214 847	.5989 964	.5765 082	.5540 915 ⁺
.87	.7183 850 ⁺	.6984 835 ⁺	.6782 835 ⁺	.6578 486	.6372 419
.88	.7872 205 ⁻	.7704 599	.7532 524	.7356 447	.7176 848
.89	.8477 328	.8344 533	.8206 648	.8063 953	.7916 750 ⁻
.90	.8979 341	.8881 394	.8778 549	.8670 921	.8558 645 ⁺
.91	.9368 317	.9301 990	.9231 574	.9157 063	.9078 472
.92	.9645 048	.9605 048	.9562 073		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .52$ to 1.00 $q = 8$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .1410\ 3215 \times \frac{1}{10^6}$		$.1201\ 3850 \times \frac{1}{10^6}$	$.1026\ 6381 \times \frac{1}{10^6}$	$.8799\ 7551 \times \frac{1}{10^{10}}$
.52	.0000 001	.0000 001		
.53	.0000 002	.0000 001	.0000 001	
.54	.0000 004	.0000 002	.0000 002	.0000 001
.55	.0000 008	.0000 005 ⁺	.0000 003	.0000 002
.56	.0000 016	.0000 010	.0000 006	.0000 004
.57	.0000 030	.0000 020	.0000 013	.0000 008
.58	.0000 058	.0000 039	.0000 025 ⁺	.0000 017
.59	.0000 109	.0000 073	.0000 049	.0000 033
.60	.0000 200	.0000 137	.0000 094	.0000 064
.61	.0000 363	.0000 253	.0000 176	.0000 122
.62	.0000 647	.0000 458	.0000 324	.0000 228
.63	.0001 135 ⁺	.0000 817	.0000 586	.0000 419
.64	.0001 959	.0001 431	.0001 043	.0000 758
.65	.0003 329	.0002 469	.0001 827	.0001 349
.66	.0005 569	.0004 193	.0003 149	.0002 359
.67	.0009 172	.0007 007	.0005 340	.0004 060
.68	.0014 872	.0011 526	.0008 912	.0006 875 ⁺
.69	.0023 745 ⁻	.0018 665 ⁻	.0014 637	.0011 453
.70	.0037 326	.0029 751	.0023 658	.0018 772
.71	.0057 769	.0046 677	.0037 630	.0030 269
.72	.0088 018	.0072 078	.0058 892	.0048 014
.73	.0132 005 ⁻	.0109 530	.0090 681	.0074 914
.74	.0194 838	.0163 766	.0137 348	.0114 948
.75	.0282 967	.0240 868	.0204 592	.0173 418
.76	.0404 262	.0348 410	.0299 640	.0257 170
.77	.0567 972	.0495 475 ⁺	.0431 338	.0374 751
.78	.0784 475 ⁻	.0692 502	.0610 079	.0536 414
.79	.1064 752	.0950 852	.0847 469	.0753 886
.80	.1419 533	.1282 033	.1155 650 ⁻	.1039 799
.81	.1858 067	.1696 533	.1546 203	.1406 679
.82	.2386 548	.2202 241	.2028 601	.1865 451
.83	.3006 310	.2802 555 ⁺	.2608 251	.2423 460
.84	.3712 004	.3494 368	.3284 325 ⁺	.3082 160
.85	.4490 099	.4266 265 ⁺	.4047 671	.3834 769
.86	.5318 143	.5097 405 ⁺	.4879 297	.4664 370
.87	.6165 253	.5957 591	.5750 017	.5543 093
.88	.6994 217	.6809 044	.6621 823	.6433 041
.89	.7765 360	.7610 119	.7451 377	.7289 493
.90	.8441 879	.8320 797	.8195 593	.8066 476
.91	.8995 828	.8909 178	.8818 583	.8724 119
.92	.9413 374	.9357 542	.9298 526	.9236 314
.93	.9697 655 ⁺	.9666 111	.9632 405 ⁺	.9596 488
.94	.9867 833	.9852 801	.9836 566	.9819 080
.95	.9953 887	.9948 199	.9941 000	.9935 222

TABLES OF THE INCOMPLETE β -FUNCTION

$p = 8.5$

$q = 8.5$

$p = 8$

	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$
$(p, q) =$	$.9413\ 8778 \times \frac{1}{10^8}$	$.6607\ 8995 \times \frac{1}{10^8}$	$.4706\ 9389 \times \frac{1}{10^8}$	$.3398\ 3483 \times \frac{1}{10^8}$	$.2484\ 2178 \times \frac{1}{10^8}$	$.1836\ 945$
x						
.05	.0000 001					
.06	.0000 003	.0000 001				
.07	.0000 012	.0000 004	.0000 001	.0000 001		
.08	.0000 034	.0000 013	.0000 005	.0000 002	.0000 001	
.09	.0000 080	.0000 035	.0000 014	.0000 005 ⁺	.0000 002	.0000 001
.10	.0000 196	.0000 083	.0000 035	.0000 014	.0000 006	.0000 002
.11	.0000 410	.0000 182	.0000 080	.0000 035	.0000 015	.0000 006
.12	.0000 797	.0000 370	.0000 169	.0000 077	.0000 035	.0000 015
.13	.0001 461	.0000 704	.0000 336	.0000 159	.0000 074	.0000 034
.14	.0002 544	.0001 272	.0000 629	.0000 308	.0000 149	.0000 072
.15	.0004 238	.0002 192	.0001 122	.0000 568	.0000 285 ⁺	.0000 142
.16	.0006 793	.0003 627	.0001 915 ⁺	.0001 001	.0000 519	.0000 266
.17	.0010 524	.0005 788	.0003 149	.0001 696	.0000 905 ⁺	.0000 479
.18	.0015 821	.0008 947	.0005 006	.0002 773	.0001 522	.0000 828
.19	.0023 151	.0013 441	.0007 721	.0004 392	.0002 476	.0001 383
.20	.0033 062	.0019 680	.0011 592	.0006 761	.0003 908	.0002 239
.21	.0046 187	.0028 151	.0016 979	.0010 142	.0006 003	.0003 523
.22	.0063 244	.0039 423	.0024 321	.0014 859	.0008 997	.0005 402
.23	.0085 025	.0054 149	.0034 131	.0021 308	.0013 184	.0008 089
.24	.0112 398	.0073 060	.0047 006	.0029 956	.0018 922	.0011 853
.25	.0146 290	.0096 967	.0063 625	.0041 354	.0026 643	.0017 024
.26	.0187 680	.0126 753	.0084 747	.0056 133	.0036 856	.0024 002
.27	.0237 581	.0163 358	.0111 210	.0075 007	.0050 152	.0033 261
.28	.0297 020	.0207 776	.0143 918	.0098 772	.0067 206	.0045 360
.29	.0367 024	.0261 029	.0183 839	.0128 298	.0088 775	.0060 937
.30	.0446 594	.0324 158	.0231 985	.0164 526	.0115 700	.0080 720
.31	.0542 682	.0398 198	.0289 400	.0208 455	.0148 896	.0105 519
.32	.0650 174	.0484 160	.0357 143	.0261 126	.0189 344	.0136 228
.33	.0771 858	.0583 002	.0436 262	.0323 611	.0238 084	.0173 813
.34	.0908 411	.0695 614	.0527 778	.0396 988	.0296 193	.0219 306
.35	.1060 372	.0822 787	.0632 657	.0482 324	.0364 772	.0273 791
.36	.1228 123	.0965 194	.0751 786	.0580 649	.0444 926	.0338 386
.37	.1411 875 ⁺	.1123 364	.0885 953	.0692 932	.0537 736	.0414 228
.38	.1611 655	.1297 668	.1035 814	.0820 055 ⁺	.0644 242	.0502 443
.39	.1827 289	.1488 295 ⁺	.1201 879	.0962 787	.0765 408	.0604 128
.40	.2058 405 ⁺	.1695 243	.1384 485 ⁺	.1121 761	.0902 101	.0720 324
.41	.2304 421	.1918 302	.1583 783	.1297 446	.1055 062	.0851 982
.42	.2564 552	.2157 051	.1799 715	.1490 128	.1224 878	.0999 040
.43	.2837 815	.2410 854	.2032 008	.1699 892	.1411 962	.1164 893
.44	.3123 034	.2678 858	.2280 168	.1926 601	.1616 522	.1347 363
.45	.3418 860	.2960 005 ⁺	.2543 469	.2169 892	.1838 550	.1547 677
.46	.3723 785	.3253 035 ⁺	.2820 965	.2429 160	.2077 802	.1765 940
.47	.4036 162	.3556 507	.3111 487	.2703 564	.2333 787	.2002 019
.48	.4354 232	.3868 811	.3413 662	.2992 025 ⁺	.2605 761	.2255 525
.49	.4676 147	.4188 199	.3725 924	.3293 236	.2802 728	.2527 821

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 8.5$

	$p = 8.5$	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$
$B(p, q) = .9413\ 8778 \times \frac{1}{10^8}$		$.6607\ 8995 \times \frac{1}{10^8}$	$.4706\ 9389 \times \frac{1}{10^8}$	$.3398\ 3483 \times \frac{1}{10^8}$	$.2484\ 21$
x					
.71	.9632 976	.9547 418	.9449 790	.9339 734	.9217 04
.72	.9702 980	.9631 740	.9549 877	.9456 944	.9352 61
.73	.9762 419	.9703 835 ⁻	.9636 048	.9558 559	.9470 96
.74	.9812 320	.9764 775 ⁺	.9709 386	.9645 637	.9573 08
.75	.9853 710	.9815 666	.9771 044	.9719 341	.9660 09
.76	.9887 602	.9857 616	.9822 210	.9780 913	.9733 27
.77	.9914 975 ⁻	.9891 719	.9864 080	.9831 630	.9793 95
.78	.9936 756	.9919 033	.9897 833	.9872 780	.9843 50
.79	.9953 813	.9940 559	.9924 604	.9905 629	.9883 31
.80	.9966 938	.9957 230	.9945 468	.9931 392	.9914 73
.81	.9976 849	.9969 896	.9961 420	.9951 213	.9939 05
.82	.9984 179	.9979 321	.9973 363	.9966 144	.9957 49
.83	.9989 476	.9986 174	.9982 100	.9977 133	.9971 14
.84	.9993 207	.9991 031	.9988 330	.9985 016	.9980 99
.85	.9995 762	.9994 376	.9992 646	.9990 511	.9987 90
.86	.9997 456	.9996 607	.9995 541	.9994 218	.9992 59
.87	.9998 539	.9998 042	.9997 414	.9996 630	.9995 66
.88	.9999 203	.9998 926	.9998 575 ⁻	.9998 133	.9997 58
.89	.9999 590	.9999 445 ⁺	.9999 260	.9999 026	.9998 73
.90	.9999 804	.9999 733	.9999 642	.9999 527	.9999 382
.91	.9999 914	.9999 882	.9999 841	.9999 789	.9999 724
.92	.9999 966	.9999 953	.9999 937	.9999 916	.9999 889
.93	.9999 988	.9999 984	.9999 978	.9999 970	.9999 961
.94	.9999 997	.9999 995 ⁺	.9999 994	.9999 991	.9999 988
.95	.9999 999	.9999 999	.9999 999	.9999 998	.9999 997
.96	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000
.97					

TABLES OF THE INCOMPLETE β -FUNCTION

to 70

$q = 8.5$

$p = 12$ to

$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$
$\cdot 1036\ 2254 \times \frac{1}{10^3}$	$\cdot 6065\ 7097 \times \frac{1}{10^3}$	$\cdot 3667\ 6384 \times \frac{1}{10^3}$	$\cdot 2282\ 0861 \times \frac{1}{10^3}$	$\cdot 1456\ 6507 \times \frac{1}{10^3}$	$\cdot 9512\ 8210 \times \frac{1}{10^3}$
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 0000\ 007$	$\cdot 0000\ 001$				
$\cdot 0000\ 016$	$\cdot 0000\ 004$	$\cdot 0000\ 001$			
$\cdot 0000\ 034$	$\cdot 0000\ 008$	$\cdot 0000\ 002$			
$\cdot 0000\ 079$	$\cdot 0000\ 017$	$\cdot 0000\ 004$	$\cdot 0000\ 001$		
$\cdot 0000\ 131$	$\cdot 0000\ 035^-$	$\cdot 0000\ 009$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 240$	$\cdot 0000\ 067$	$\cdot 0000\ 018$	$\cdot 0000\ 005^-$	$\cdot 0000\ 001$	
$\cdot 0000\ 422$	$\cdot 0000\ 125^+$	$\cdot 0000\ 036$	$\cdot 0000\ 010$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 0000\ 718$	$\cdot 0000\ 224$	$\cdot 0000\ 068$	$\cdot 0000\ 020$	$\cdot 0000\ 006$	$\cdot 0000\ 002$
$\cdot 0001\ 186$	$\cdot 0000\ 388$	$\cdot 0000\ 124$	$\cdot 0000\ 039$	$\cdot 0000\ 012$	$\cdot 0000\ 004$
$\cdot 0001\ 903$	$\cdot 0000\ 652$	$\cdot 0000\ 218$	$\cdot 0000\ 071$	$\cdot 0000\ 023$	$\cdot 0000\ 007$
$\cdot 0002\ 976$	$\cdot 0001\ 065^-$	$\cdot 0000\ 372$	$\cdot 0000\ 127$	$\cdot 0000\ 043$	$\cdot 0000\ 014$
$\cdot 0004\ 546$	$\cdot 0001\ 606$	$\cdot 0000\ 617$	$\cdot 0000\ 220$	$\cdot 0000\ 077$	$\cdot 0000\ 026$
$\cdot 0006\ 794$	$\cdot 0002\ 638$	$\cdot 0001\ 000$	$\cdot 0000\ 371$	$\cdot 0000\ 135^-$	$\cdot 0000\ 048$
$\cdot 0009\ 951$	$\cdot 0004\ 015^-$	$\cdot 0001\ 581$	$\cdot 0000\ 609$	$\cdot 0000\ 230$	$\cdot 0000\ 085^+$
$\cdot 0014\ 305^-$	$\cdot 0005\ 988$	$\cdot 0002\ 447$	$\cdot 0000\ 978$	$\cdot 0000\ 384$	$\cdot 0000\ 148$
$\cdot 0020\ 203$	$\cdot 0008\ 763$	$\cdot 0003\ 710$	$\cdot 0001\ 537$	$\cdot 0000\ 625^-$	$\cdot 0000\ 249$
$\cdot 0028\ 083$	$\cdot 0012\ 601$	$\cdot 0005\ 521$	$\cdot 0002\ 368$	$\cdot 0000\ 996$	$\cdot 0000\ 412$
$\cdot 0038\ 435^+$	$\cdot 0017\ 822$	$\cdot 0008\ 070$	$\cdot 0003\ 577$	$\cdot 0001\ 556$	$\cdot 0000\ 665^-$
$\cdot 0051\ 852$	$\cdot 0024\ 817$	$\cdot 0011\ 602$	$\cdot 0005\ 310$	$\cdot 0002\ 384$	$\cdot 0001\ 052$
$\cdot 0069\ 009$	$\cdot 0034\ 056$	$\cdot 0016\ 418$	$\cdot 0007\ 750^+$	$\cdot 0003\ 590$	$\cdot 0001\ 634$
$\cdot 0090\ 674$	$\cdot 0046\ 092$	$\cdot 0022\ 891$	$\cdot 0011\ 134$	$\cdot 0005\ 314$	$\cdot 0002\ 493$
$\cdot 0117\ 704$	$\cdot 0061\ 568$	$\cdot 0031\ 471$	$\cdot 0015\ 756$	$\cdot 0007\ 742$	$\cdot 0003\ 739$
$\cdot 0151\ 040$	$\cdot 0081\ 226$	$\cdot 0042\ 694$	$\cdot 0021\ 983$	$\cdot 0011\ 109$	$\cdot 0005\ 520$
$\cdot 0191\ 707$	$\cdot 0105\ 900$	$\cdot 0057\ 188$	$\cdot 0030\ 257$	$\cdot 0015\ 714$	$\cdot 0008\ 025^-$
$\cdot 0240\ 797$	$\cdot 0136\ 523$	$\cdot 0075\ 682$	$\cdot 0041\ 112$	$\cdot 0021\ 925^+$	$\cdot 0011\ 499$
$\cdot 0299\ 460$	$\cdot 0174\ 117$	$\cdot 0099\ 009$	$\cdot 0055\ 177$	$\cdot 0030\ 193$	$\cdot 0016\ 249$
$\cdot 0368\ 881$	$\cdot 0219\ 792$	$\cdot 0128\ 103$	$\cdot 0073\ 188$	$\cdot 0041\ 062$	$\cdot 0022\ 661$
$\cdot 0450\ 266$	$\cdot 0274\ 729$	$\cdot 0164\ 005^-$	$\cdot 0095\ 989$	$\cdot 0055\ 179$	$\cdot 0031\ 204$
$\cdot 0544\ 814$	$\cdot 0340\ 163$	$\cdot 0207\ 849$	$\cdot 0124\ 538$	$\cdot 0073\ 302$	$\cdot 0042\ 448$
$\cdot 0653\ 689$	$\cdot 0417\ 372$	$\cdot 0260\ 858$	$\cdot 0159\ 906$	$\cdot 0096\ 307$	$\cdot 0057\ 074$
$\cdot 0777\ 991$	$\cdot 0507\ 044$	$\cdot 0324\ 327$	$\cdot 0203\ 273$	$\cdot 0125\ 193$	$\cdot 0075\ 881$
$\cdot 0918\ 727$	$\cdot 0612\ 252$	$\cdot 0399\ 606$	$\cdot 0255\ 917$	$\cdot 0161\ 083$	$\cdot 0099\ 797$
$\cdot 1076\ 774$	$\cdot 0732\ 426$	$\cdot 0488\ 071$	$\cdot 0319\ 205^-$	$\cdot 0205\ 220$	$\cdot 0129\ 883$
$\cdot 1252\ 849$	$\cdot 0869\ 314$	$\cdot 0591\ 103$	$\cdot 0394\ 567$	$\cdot 0258\ 958$	$\cdot 0167\ 336$
$\cdot 1447\ 480$	$\cdot 1023\ 950^+$	$\cdot 0710\ 050^-$	$\cdot 0483\ 481$	$\cdot 0323\ 750^-$	$\cdot 0213\ 485^+$
$\cdot 1660\ 968$	$\cdot 1197\ 214$	$\cdot 0846\ 188$	$\cdot 0587\ 432$	$\cdot 0401\ 127$	$\cdot 0269\ 782$
$\cdot 1893\ 372$	$\cdot 1389\ 797$	$\cdot 1000\ 689$	$\cdot 0707\ 885^-$	$\cdot 0492\ 674$	$\cdot 0337\ 789$
$\cdot 2144\ 475^+$	$\cdot 1602\ 163$	$\cdot 1174\ 570$	$\cdot 0846\ 240$	$\cdot 0599\ 993$	$\cdot 0419\ 155^-$
$\cdot 2413\ 775^-$	$\cdot 1834\ 515^+$	$\cdot 1368\ 657$	$\cdot 1003\ 790$	$\cdot 0724\ 666$	$\cdot 0515\ 586$
$\cdot 2700\ 469$	$\cdot 2086\ 770$	$\cdot 1583\ 537$	$\cdot 1181\ 670$	$\cdot 0868\ 213$	$\cdot 0628\ 811$
$\cdot 3003\ 450^+$	$\cdot 2358\ 529$	$\cdot 1819\ 523$	$\cdot 1380\ 812$	$\cdot 1032\ 036$	$\cdot 0760\ 535^+$
$\cdot 3321\ 312$	$\cdot 2649\ 061$	$\cdot 2076\ 614$	$\cdot 1601\ 891$	$\cdot 1217\ 366$	$\cdot 0912\ 390$
$\cdot 3652\ 355^-$	$\cdot 2957\ 294$	$\cdot 2354\ 462$	$\cdot 1845\ 284$	$\cdot 1425\ 212$	$\cdot 1082\ 312$
$\cdot 3997\ 611$					

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.98$ $q = 8.5$

	$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$
$B(p, q) = .1036\ 2254 \times \frac{1}{10^8}$		$.6065\ 7097 \times \frac{1}{10^8}$	$.3667\ 6384 \times \frac{1}{10^8}$	$.2282\ 0861 \times \frac{1}{10^8}$	$.1456\ 6500 \times \frac{1}{10^8}$
x					
.71	.8773 556	.8418 049	.8020 019	.7586 023	.7123 818
.72	.8970 009	.8657 978	.8303 703	.7911 976	.7488 910
.73	.9145 117	.8874 827	.8563 681	.8214 864	.7832 909
.74	.9299 338	.9068 441	.8799 001	.8492 803	.8152 923
.75	.9433 447	.9239 095 ⁻	.9009 236	.8744 488	.8446 646
.76	.9548 504	.9387 468	.9194 473	.8969 219	.8712 430
.77	.9645 803	.9514 601	.9355 292	.9166 909	.8949 326
.78	.9726 823	.9621 847	.9492 725 ⁺	.9338 057	.9157 094
.79	.9793 177	.9710 809	.9608 199	.9483 711	.9336 192
.80	.9846 549	.9783 279	.9703 461	.9605 399	.9487 725
.81	.9888 650 ⁻	.9841 161	.9780 503	.9705 049	.9613 373
.82	.9921 155 ⁺	.9886 406	.9841 473	.9784 888	.9715 290
.83	.9945 670	.9920 946	.9888 587	.9847 339	.9795 987
.84	.9963 683	.9946 633	.9924 047	.9894 912	.9858 202
.85	.9976 540	.9965 185 ⁺	.9949 966	.9930 099	.9904 760
.86	.9985 421	.9978 153	.9968 296	.9955 278	.9938 482
.87	.9991 334	.9986 886	.9980 785 ⁻	.9972 632	.9961 994
.88	.9995 106	.9992 523	.9988 938	.9984 093	.9977 698
.89	.9997 398	.9995 986	.9994 004	.9991 295 ⁻	.9987 678
.90	.9998 712	.9997 993	.9996 974	.9995 565 ⁺	.9993 663
.91	.9999 415 ⁻	.9999 080	.9998 599	.9997 928	.9997 011
.92	.9999 761	.9999 621	.9999 417	.9999 130	.9998 733
.93	.9999 915 ⁻	.9999 863	.9999 788	.9999 681	.9999 531
.94	.9999 974	.9999 959	.9999 935 ⁺	.9999 902	.9999 854
.95	.9999 994	.9999 990	.9999 985 ⁻	.9999 976	.9999 964
.96	.9999 999	.9999 998	.9999 997	.9999 996	.9999 994
.97	1.0000 000	1.0000 000	1.0000 000	1.0000 000	.9999 999
.98					1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

21 to $\cdot 80$ $q = 8\cdot 5$ $p =$

$p = 18$ $p = 19$ $p = 20$ $p = 21$ $p = 22$ $p = 23$

$b, q) = \cdot 6341\ 8806 \times \frac{1}{10^7}$ $\cdot 4307\ 6925 \times \frac{1}{10^7}$ $\cdot 2976\ 2239 \times \frac{1}{10^7}$ $\cdot 2088\ 5782 \times \frac{1}{10^7}$ $\cdot 1486\ 7845 \times \frac{1}{10^7}$ $\cdot 1072\ 434 \times \frac{1}{10^7}$

21	·0000 001					
22	·0000 002	·0000 001				
23	·0000 005 ⁻	·0000 001				
24	·0000 009	·0000 003	·0000 001			
25	·0000 017	·0000 006	·0000 002	·0000 001		
26	·0000 031	·0000 011	·0000 004	·0000 001		
27	·0000 056	·0000 021	·0000 008	·0000 003	·0000 001	
28	·0000 098	·0000 038	·0000 015 ⁻	·0000 005 ⁺	·0000 002	·0000 001
29	·0000 167	·0000 067	·0000 027	·0000 010	·0000 004	·0000 002
30	·0000 280	·0000 116	·0000 047	·0000 019	·0000 008	·0000 003

31	·0000 457	·0000 196	·0000 083	·0000 034	·0000 014	·0000 006
32	·0000 732	·0000 323	·0000 141	·0000 061	·0000 026	·0000 011
33	·0001 151	·0000 524	·0000 236	·0000 105 ⁻	·0000 046	·0000 020
34	·0001 778	·0000 834	·0000 386	·0000 176	·0000 080	·0000 036
35	·0002 700	·0001 303	·0000 620	·0000 292	·0000 136	·0000 062
36	·0004 035 ⁺	·0002 001	·0000 979	·0000 474	·0000 226	·0000 107
37	·0005 939	·0003 024	·0001 520	·0000 755 ⁺	·0000 371	·0000 180
38	·0008 613	·0004 502	·0002 323	·0001 184	·0000 597	·0000 298
39	·0012 318	·0006 603	·0003 495 ⁻	·0001 828	·0000 946	·0000 484
40	·0017 382	·0009 550 ⁺	·0005 181	·0002 778	·0001 473	·0000 773

41	·0024 217	·0013 628	·0007 573	·0004 159	·0002 260	·0001 215
42	·0033 326	·0019 197	·0010 920	·0006 140	·0003 415 ⁺	·0001 881
43	·0045 322	·0026 706	·0015 541	·0008 940	·0005 088	·0002 867
44	·0060 934	·0036 709	·0021 843	·0012 849	·0007 478	·0004 309
45	·0081 025 ⁻	·0049 878	·0030 329	·0018 233	·0010 846	·0006 388
46	·0106 597	·0067 015 ⁻	·0041 620	·0025 557	·0015 530	·0009 345
47	·0138 797	·0089 068	·0056 468	·0035 401	·0021 963	·0013 494
48	·0178 923	·0117 138	·0075 775 ⁻	·0048 475 ⁺	·0030 691	·0019 245
49	·0228 413	·0152 488	·0100 599	·0065 639	·0042 391	·0027 115
50	·0288 845 ⁻	·0196 542	·0132 173	·0087 919	·0057 890	·0037 757

51	·0361 911	·0250 882	·0171 904	·0116 522	·0078 189	·0051 974
52	·0449 400	·0317 234	·0221 378	·0152 842	·0104 475 ⁻	·0070 750
53	·0553 157	·0397 450 ⁺	·0282 350 ⁺	·0198 471	·0138 138	·0095 261
54	·0675 046	·0493 479	·0356 729	·0255 193	·0180 782	·0126 901
55	·0816 897	·0607 319	·0446 552	·0324 971	·0234 220	·0167 290
56	·0980 442	·0740 977	·0553 942	·0409 926	·0300 473	·0218 284
57	·1167 254	·0896 398	·0681 067	·0512 302	·0381 750 ⁻	·0281 966
58	·1378 672	·1075 400	·0830 069	·0634 417	·0480 411	·0360 637
59	·1615 723	·1279 592	·1002 992	·0778 600	·0598 926	·0456 779
60	·1879 050 ⁺	·1510 292	·1201 699	·0947 111	·0739 803	·0573 014

61	·2168 838	·1768 437	·1427 780	·1142 053	·0905 513	·0712 033
62	·2484 747	·2054 498	·1682 445 ⁺	·1365 270	·1098 390	·0876 516
63	·2825 858	·2368 397	·1966 634	·1618 233	·1320 521	·1069 022
64	·3190 632	·2709 438	·2279 909	·1901 923	·1573 616	·1291 869
65	·3576 890	·3076 247	·2622 374	·2216 726	·1858 886	·1546 996
66	·3981 814	·3466 586	·2992 822	·2566 671	·2186 996	·1846 996

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.98$ $q = 8.5$

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$B(p, q) = .6341\ 8806 \times \frac{x}{10^7}$	$.4307\ 6925 \times \frac{x}{10^7}$	$.2976\ 2239 \times \frac{x}{10^7}$	$.2088\ 5782 \times \frac{x}{10^7}$	$.1486\ 78$	
x					
.81	.9376 988	.9230 889	.9065 837	.8882 009	.8679 93
.82	.9532 408	.9417 334	.9285 727	.9137 339	.8972 20
.83	.9658 501	.9570 451	.9468 521	.9352 193	.9221 15
.84	.9758 082	.9692 836	.9616 395 ⁻	.9528 105 ⁻	.9427 45
.85	.9834 408	.9787 761	.9732 459	.9667 825 ⁺	.9593 26
.86	.9890 981	.9858 950 ⁺	.9820 530	.9775 098	.9722 07
.87	.9931 355 ⁺	.9910 348	.9884 857	.9854 363	.9818 35
.88	.9958 949	.9945 880	.9929 839	.9910 431	.9887 25
.89	.9976 888	.9969 243	.9959 754	.9948 141	.9934 11
.90	.9987 888	.9983 730	.9978 511	.9972 052	.9964 16
.91	.9994 179	.9992 107	.9989 478	.9986 188	.9982 12
.92	.9997 485 ⁺	.9996 559	.9995 370	.9993 865 ⁺	.9991 98
.93	.9999 051	.9998 689	.9998 220	.9997 620	.9996 86
.94	.9999 700	.9999 581	.9999 426	.9999 226	.9998 97
.95	.9999 925 ⁺	.9999 895 ⁻	.9999 855 ⁻	.9999 802	.9999 73
.96	.9999 987	.9999 981	.9999 974	.9999 964	.9999 95
.97	.9999 999	.9999 998	.9999 997	.9999 996	.9999 99
.98	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

to .90

$q = 8.5$

$p = 24$

$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$
$= .7830\ 4756 \times \frac{1}{10^8}$	$.5782\ 5051 \times \frac{1}{10^8}$	$.4315\ 3023 \times \frac{1}{10^8}$	$.3252\ 1119 \times \frac{1}{10^8}$	$.2473\ 4372 \times \frac{1}{10^8}$	$.1897\ 4313 \times \frac{1}{10^8}$
.0000 001					
.0000 001					
.0000 002	.0000 001				
.0000 005-	.0000 002	.0000 001			
.0000 009	.0000 004	.0000 002	.0000 001		
.0000 016	.0000 007	.0000 003	.0000 001	.0000 001	
.0000 028	.0000 013	.0000 006	.0000 003	.0000 001	
.0000 050+	.0000 023	.0000 011	.0000 005-	.0000 002	.0000 001
.0000 087	.0000 041	.0000 020	.0000 009	.0000 004	.0000 002
.0000 147	.0000 072	.0000 035+	.0000 017	.0000 008	.0000 004
.0000 246	.0000 124	.0000 062	.0000 030	.0000 015-	.0000 007
.0000 402	.0000 207	.0000 106	.0000 054	.0000 027	.0000 014
.0000 648	.0000 342	.0000 179	.0000 093	.0000 048	.0000 025-
.0001 026	.0000 555-	.0000 298	.0000 158	.0000 084	.0000 044
.0001 601	.0000 886	.0000 486	.0000 265-	.0000 143	.0000 077
.0002 460	.0001 393	.0000 782	.0000 436	.0000 241	.0000 132
.0003 728	.0002 157	.0001 238	.0000 705+	.0000 399	.0000 224
.0005 572	.0003 294	.0001 932	.0001 124	.0000 650-	.0000 373
.0008 216	.0004 960	.0002 971	.0001 766	.0001 042	.0000 611
.0011 959	.0007 369	.0004 505-	.0002 734	.0001 647	.0000 986
.0017 190	.0010 806	.0006 740	.0004 173	.0002 566	.0001 567
.0024 408	.0015 647	.0009 953	.0006 284	.0003 941	.0002 455-
.0034 245+	.0022 378	.0014 510	.0009 340	.0005 971	.0003 792
.0047 494	.0031 622	.0020 893	.0013 704	.0008 927	.0005 778
.0065 125+	.0044 162	.0029 719	.0019 856	.0013 176	.0008 688
.0088 318	.0060 972	.0041 775-	.0028 418	.0019 202	.0012 893
.0118 476	.0083 238	.0058 043	.0040 188	.0027 640	.0018 890
.0157 250-	.0112 390	.0079 731	.0056 167	.0039 306	.0027 334
.0206 543	.0150 117	.0108 306	.0077 598	.0055 233	.0039 070
.0268 515-	.0198 387	.0145 510	.0105 995+	.0076 710	.0055 175+
.0345 565-	.0259 443	.0193 388	.0143 173	.0105 317	.0076 999
.0440 308	.0335 802	.0254 288	.0191 271	.0142 957	.0106 205+
.0555 525+	.0430 221	.0330 855-	.0252 757	.0191 884	.0144 805-
.0694 097	.0545 653	.0426 008	.0330 429	.0254 710	.0195 189
.0858 911	.0685 175+	.0542 886	.0427 385+	.0334 407	.0260 141
.1052 751	.0851 892	.0684 777	.0546 972	.0434 278	.0342 834
.1278 160	.1048 810	.0855 009	.0692 700	.0557 894	.0446 799
.1537 290	.1278 692	.1056 814	.0868 133	.0709 012	.0575 862
.1831 732	.1543 883	.1293 167	.1076 731	.0891 439	.0734 039
.2162 347	.1846 127	.1566 589	.1321 670	.1108 863	.0925 393
.2529 098	.2186 367	.1878 938	.1605 621	.1364 647	.1153 837
.2930 898	.2564 558	.2231 189	.1930 515+	.1661 580	.1422 899
.3365 489	.2979 492	.2623 217	.2297 294	.2001 609	.1735 439
.3829 364	.3428 660	.3053 601	.2757 664		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .91$ to $.99$ $q = 8.5$

	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$
$B(p, q) = .7830\ 4756 \times \frac{1}{10^8}$		$.5782\ 5051 \times \frac{1}{10^8}$	$.4315\ 3023 \times \frac{1}{10^8}$	$.3252\ 1119 \times \frac{1}{10^8}$	$.2473\ 437$
x					
.91	.9971 184	.9964 038	.9955 584	.9945 672	.9934 147
.92	.9986 843	.9983 430	.9979 348	.9974 509	.9968 820
.93	.9994 752	.9993 330	.9991 611	.9989 551	.9987 103
.94	.9998 246	.9997 750 ⁻	.9997 144	.9996 410	.9995 528
.95	.9999 539	.9999 403	.9999 236	.9999 031	.9998 781
.96	.9999 914	.9999 888	.9999 856	.9999 815 ⁺	.9999 766
.97	.9999 991	.9999 988	.9999 984	.9999 980	.9999 974
.98	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 999
.99			1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

to .99

$q = 8.5$

$p = 30$ to

$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$
$\cdot 1467\ 3468 \times \frac{1}{10^8}$	$\cdot 1143\ 3872 \times \frac{1}{10^8}$	$\cdot 8973\ 4182 \times \frac{1}{10^8}$	$\cdot 7090\ 1082 \times \frac{1}{10^8}$	$\cdot 5637\ 9174 \times \frac{1}{10^8}$	$\cdot 4510\ 3339 \times \frac{1}{10^8}$
$\cdot 0000\ 001$					
$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 023$	$\cdot 0000\ 012$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 041$	$\cdot 0000\ 022$	$\cdot 0000\ 012$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 002$
$\cdot 0000\ 072$	$\cdot 0000\ 039$	$\cdot 0000\ 021$	$\cdot 0000\ 011$	$\cdot 0000\ 006$	$\cdot 0000\ 003$
$\cdot 0000\ 125^+$	$\cdot 0000\ 069$	$\cdot 0000\ 038$	$\cdot 0000\ 021$	$\cdot 0000\ 011$	$\cdot 0000\ 006$
$\cdot 0000\ 213$	$\cdot 0000\ 121$	$\cdot 0000\ 068$	$\cdot 0000\ 038$	$\cdot 0000\ 021$	$\cdot 0000\ 012$
$\cdot 0000\ 356$	$\cdot 0000\ 206$	$\cdot 0000\ 119$	$\cdot 0000\ 068$	$\cdot 0000\ 039$	$\cdot 0000\ 022$
$\cdot 0000\ 587$	$\cdot 0000\ 347$	$\cdot 0000\ 204$	$\cdot 0000\ 119$	$\cdot 0000\ 069$	$\cdot 0000\ 040$
$\cdot 0000\ 951$	$\cdot 0000\ 574$	$\cdot 0000\ 344$	$\cdot 0000\ 206$	$\cdot 0000\ 122$	$\cdot 0000\ 072$
$\cdot 0001\ 520$	$\cdot 0000\ 936$	$\cdot 0000\ 573$	$\cdot 0000\ 349$	$\cdot 0000\ 211$	$\cdot 0000\ 127$
$\cdot 0002\ 394$	$\cdot 0001\ 502$	$\cdot 0000\ 938$	$\cdot 0000\ 582$	$\cdot 0000\ 360$	$\cdot 0000\ 221$
$\cdot 0003\ 717$	$\cdot 0002\ 377$	$\cdot 0001\ 512$	$\cdot 0000\ 957$	$\cdot 0000\ 603$	$\cdot 0000\ 378$
$\cdot 0005\ 693$	$\cdot 0003\ 710$	$\cdot 0002\ 404$	$\cdot 0001\ 550^+$	$\cdot 0000\ 994$	$\cdot 0000\ 635^-$
$\cdot 0008\ 604$	$\cdot 0005\ 709$	$\cdot 0003\ 768$	$\cdot 0002\ 474$	$\cdot 0001\ 617$	$\cdot 0001\ 051$
$\cdot 0012\ 833$	$\cdot 0008\ 669$	$\cdot 0005\ 825^-$	$\cdot 0003\ 893$	$\cdot 0002\ 590$	$\cdot 0001\ 715^-$
$\cdot 0018\ 896$	$\cdot 0012\ 990$	$\cdot 0008\ 882$	$\cdot 0006\ 042$	$\cdot 0004\ 091$	$\cdot 0002\ 757$
$\cdot 0027\ 475^-$	$\cdot 0019\ 213$	$\cdot 0013\ 364$	$\cdot 0009\ 249$	$\cdot 0006\ 371$	$\cdot 0004\ 368$
$\cdot 0039\ 455^-$	$\cdot 0028\ 057$	$\cdot 0019\ 848$	$\cdot 0013\ 970$	$\cdot 0009\ 786$	$\cdot 0006\ 824$
$\cdot 0055\ 971$	$\cdot 0040\ 462$	$\cdot 0029\ 099$	$\cdot 0020\ 823$	$\cdot 0014\ 830$	$\cdot 0010\ 515^-$
$\cdot 0078\ 451$	$\cdot 0057\ 635^-$	$\cdot 0042\ 124$	$\cdot 0030\ 636$	$\cdot 0022\ 176$	$\cdot 0015\ 981$
$\cdot 0108\ 660$	$\cdot 0081\ 099$	$\cdot 0060\ 219$	$\cdot 0044\ 498$	$\cdot 0032\ 728$	$\cdot 0023\ 965^-$
$\cdot 0148\ 742$	$\cdot 0112\ 746$	$\cdot 0085\ 029$	$\cdot 0063\ 817$	$\cdot 0047\ 676$	$\cdot 0035\ 461$
$\cdot 0201\ 253$	$\cdot 0154\ 879$	$\cdot 0118\ 595^-$	$\cdot 0090\ 378$	$\cdot 0068\ 562$	$\cdot 0051\ 785^+$
$\cdot 0269\ 175^+$	$\cdot 0210\ 248$	$\cdot 0163\ 410$	$\cdot 0126\ 409$	$\cdot 0097\ 345^+$	$\cdot 0074\ 642$
$\cdot 0355\ 912$	$\cdot 0282\ 067$	$\cdot 0222\ 454$	$\cdot 0174\ 624$	$\cdot 0136\ 469$	$\cdot 0106\ 198$
$\cdot 0465\ 255^+$	$\cdot 0374\ 005^-$	$\cdot 0299\ 209$	$\cdot 0238\ 274$	$\cdot 0188\ 916$	$\cdot 0149\ 154$
$\cdot 0601\ 307$	$\cdot 0490\ 145^-$	$\cdot 0397\ 647$	$\cdot 0321\ 148$	$\cdot 0258\ 245^+$	$\cdot 0206\ 804$
$\cdot 0768\ 368$	$\cdot 0634\ 896$	$\cdot 0522\ 178$	$\cdot 0427\ 564$	$\cdot 0348\ 605^+$	$\cdot 0283\ 069$
$\cdot 0970\ 760$	$\cdot 0812\ 856$	$\cdot 0677\ 543$	$\cdot 0562\ 294$	$\cdot 0464\ 699$	$\cdot 0382\ 504$
$\cdot 1212\ 614$	$\cdot 1028\ 614$	$\cdot 0868\ 652$	$\cdot 0730\ 436$	$\cdot 0611\ 695^+$	$\cdot 0510\ 242$
$\cdot 1497\ 585^+$	$\cdot 1286\ 489$	$\cdot 1100\ 351$	$\cdot 0937\ 218$	$\cdot 0795\ 069$	$\cdot 0671\ 881$
$\cdot 1828\ 546$	$\cdot 1590\ 224$	$\cdot 1377\ 118$	$\cdot 1187\ 720$	$\cdot 1020\ 361$	$\cdot 0873\ 282$
$\cdot 2207\ 231$	$\cdot 1942\ 610$	$\cdot 1702\ 701$	$\cdot 1486\ 521$	$\cdot 1292\ 844$	$\cdot 1120\ 271$
$\cdot 2633\ 887$	$\cdot 2345\ 105^-$	$\cdot 2079\ 704$	$\cdot 1837\ 278$	$\cdot 1617\ 110$	$\cdot 1418\ 247$
$\cdot 3106\ 942$	$\cdot 2797\ 432$	$\cdot 2509\ 139$	$\cdot 2242\ 243$	$\cdot 1996\ 577$	$\cdot 1771\ 684$
$\cdot 3622\ 724$	$\cdot 3297\ 225^+$	$\cdot 2989\ 996$	$\cdot 2701\ 777$	$\cdot 2432\ 947$	$\cdot 2183\ 568$
$\cdot 4175\ 294$	$\cdot 3839\ 746$	$\cdot 3518\ 865^-$	$\cdot 3213\ 878$	$\cdot 2925\ 664$	$\cdot 2654\ 787$
$\cdot 4756\ 406$	$\cdot 4417\ 736$	$\cdot 4089\ 663$	$\cdot 3773\ 791$	$\cdot 3471\ 414$	$\cdot 3183\ 534$
$\cdot 5355\ 652$	$\cdot 5021\ 439$	$\cdot 4693\ 534$	$\cdot 4373\ 774$	$\cdot 4063\ 753$	$\cdot 3764\ 811$
$\cdot 5960\ 800$	$\cdot 5638\ 841$	$\cdot 5318\ 960$	$\cdot 5003\ 076$	$\cdot 4692\ 936$	$\cdot 4390\ 094$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .43$ to $.99$ $q = 8.5$

p	$p = 36$	$p = 37$	$p = 38$	$p = 39$
$I(p, q) = .3629\ 0013 \times 10^4$		$.2035\ 8237 \times 10^4$	$.2387\ 3731 \times 10^4$	$.1950\ 9716 \times 10^4$
.43	.0000 001			
.44	.0000 002	.0000 001		
.45	.0000 003	.0000 002	.0000 001	.0000 001
.46	.0000 007	.0000 004	.0000 002	.0000 001
.47	.0000 012	.0000 007	.0000 004	.0000 002
.48	.0000 014	.0000 013	.0000 008	.0000 004
.49	.0000 012	.0000 025	.0000 015	.0000 008
.50	.0000 076	.0000 016	.0000 027	.0000 016
.51	.0000 115 ⁺	.0000 082	.0000 050 ⁺	.0000 030
.52	.0000 236	.0000 146	.0000 091	.0000 056
.53	.0000 404	.0000 256	.0000 161	.0000 101
.54	.0000 681	.0000 439	.0000 282	.0000 180
.55	.0001 131	.0000 742	.0000 485 ⁺	.0000 316
.56	.0001 850	.0001 236	.0000 822	.0000 545 ⁺
.57	.0002 952	.0002 027	.0001 372	.0000 926
.58	.0004 738	.0003 276	.0002 256	.0001 548
.59	.0007 424	.0005 210	.0003 655 ⁻	.0002 550 ⁻
.60	.0011 468	.0008 105 ⁺	.0005 834	.0004 137
.61	.0017 474	.0012 680	.0009 170	.0006 615 ⁺
.62	.0026 765 ⁺	.0019 376	.0014 230	.0010 425 ⁺
.63	.0048 052	.0029 182	.0021 770	.0016 105 ⁺
.64	.0096 008	.0043 353	.0032 851	.0024 802
.65	.0082 305	.0063 530	.0048 800	.0037 451
.66	.0117 278	.0094 874	.0071 702	.0055 700
.67	.0164 052	.0131 020	.0103 767	.0081 864
.68	.0228 055 ⁺	.0184 401	.0148 127	.0118 510
.69	.0313 046	.0246 218	.0208 568	.0169 201
.70	.0424 006	.0341 066	.0280 657	.0238 188
.71	.0569 055 ⁺	.0474 550	.0396 754	.0330 606
.72	.0744 004	.0647 850	.0545 015 ⁻	.0452 428
.73	.0967 203	.0842 463	.0744 804	.0610 312
.74	.1240 554	.1099 273	.0937 563	.0811 507
.75	.1566 801	.1481 250	.1213 842	.1064 470
.76	.1951 127	.1742 681	.1548 800	.1373 103
.77	.2391 516	.2105 868	.1947 640	.1746 438
.78	.2910 870	.2654 885 ⁺	.2412 805 ⁻	.2187 640
.79	.3428 040	.3204 294	.2944 106	.2608 165 ⁺
.80	.4005 004	.3811 520	.3537 807	.3275 795 ⁻
.81	.4753 440	.4405 847	.4185 678	.3913 052
.82	.5645 843	.5184 420	.4874 710	.4601 167
.83	.6625 041	.5856 171	.5557 780	.5321 045 ⁺
.84	.6830 816	.6554 054	.6303 051	.6052 804
.85	.7112 001	.6812 013		

TABLES OF THE INCOMPLETE β -FUNCTION $x = .47$ to $.99$ $q = 8.5$ $p = 41$ to 45

	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$B(p, q) = .1321\ 1137 \times \frac{1}{10^9}$	$.1094\ 2558 \times \frac{1}{10^9}$	$.9100\ 7411 \times \frac{1}{10^{10}}$	$.7598\ 6771 \times \frac{1}{10^{10}}$	$.6368\ 4151 \times \frac{1}{10^{10}}$	
.47	.0000 001				
.48	.0000 001	.0000 001			
.49	.0000 003	.0000 002	.0000 001	.0000 001	
.50	.0000 006	.0000 003	.0000 002	.0000 001	.0000 001
.51	.0000 011	.0000 007	.0000 004	.0000 002	.0000 001
.52	.0000 021	.0000 013	.0000 008	.0000 005 ⁻	.0000 003
.53	.0000 039	.0000 025 ⁻	.0000 015 ⁺	.0000 009	.0000 006
.54	.0000 073	.0000 046	.0000 029	.0000 018	.0000 011
.55	.0000 133	.0000 085 ⁺	.0000 055 ⁻	.0000 035 ⁺	.0000 022
.56	.0000 237	.0000 155 ⁺	.0000 102	.0000 066	.0000 043
.57	.0000 417	.0000 278	.0000 185 ⁺	.0000 123	.0000 081
.58	.0000 721	.0000 490	.0000 331	.0000 224	.0000 150 ⁺
.59	.0001 228	.0000 848	.0000 583	.0000 400	.0000 274
.60	.0002 059	.0001 445 ⁺	.0001 011	.0000 705 ⁺	.0000 491
.61	.0003 400	.0002 425 ⁺	.0001 725 ⁻	.0001 223	.0000 864
.62	.0005 531	.0004 008	.0002 896	.0002 086	.0001 498
.63	.0008 863	.0006 524	.0004 788	.0003 503	.0002 556
.64	.0013 993	.0010 460	.0007 794	.0005 791	.0004 290
.65	.0021 772	.0016 520	.0012 497	.0009 426	.0007 089
.66	.0033 383	.0025 707	.0019 736	.0015 107	.0011 532
.67	.0050 446	.0039 412	.0030 700	.0023 844	.0018 468
.68	.0075 130	.0059 537	.0047 041	.0037 061	.0029 118
.69	.0110 276	.0088 616	.0071 001	.0056 728	.0045 200
.70	.0159 522	.0129 954	.0105 560	.0085 506	.0069 075 ⁺
.71	.0227 405 ⁻	.0187 754	.0154 575 ⁻	.0126 909	.0103 918
.72	.0319 432	.0267 222	.0222 918	.0185 456	.0153 885 ⁺
.73	.0442 081	.0374 612	.0316 564	.0266 799	.0224 277
.74	.0602 702	.0517 186	.0442 603	.0377 786	.0321 645 ⁻
.75	.0809 282	.0703 045 ⁻	.0609 139	.0526 425 ⁻	.0453 815 ⁻
.76	.1070 039	.0940 789	.0825 019	.0721 687	.0629 768
.77	.1392 819	.1238 974	.1099 360	.0973 107	.0859 321
.78	.1784 301	.1605 345 ⁻	.1440 833	.1290 132	.1152 549
.79	.2249 020	.2045 854	.1856 692	.1681 190	.1518 910
.80	.2788 285 ⁻	.2563 524	.2351 607	.2152 503	.1966 070
.81	.3399 106	.3157 244	.2926 352	.2706 710	.2498 474
.82	.4073 290	.3820 674	.3576 539	.3341 432	.3115 782
.83	.4796 910	.4541 468	.4291 590	.4048 017	.3811 392
.84	.5550 365 ⁻	.5301 051	.5054 230	.4810 739	.4571 342
.85	.6309 208	.6075 201	.5840 777	.5606 762	.5373 943
.86	.7045 863	.6835 582	.6622 447	.6407 180	.6190 495 ⁺
.87	.7773 178	.7552 257	.7337 772	.7119 277	.6907 333
.88	.8442 577	.8196 996	.8046 007	.7889 962	.7729 236
.89	.8857 369	.8746 935 ⁺	.8631 097	.8510 020	.8383 893
.90	.9265 569	.9187 906	.9105 526	.9018 454	.8926 730
.91	.9566 528	.9505 524 ⁺			

	$p = 46$	$p = 47$	$p = 48$	$p = 49$	
$B(p, q) = .5356 \ 6108 \times \frac{1}{100}$	$.4521 \ 1761 \times \frac{1}{100}$	$.3828 \ 7437 \times \frac{1}{100}$	$.3252 \ 7380 \times \frac{1}{100}$		
π					
.51	.0000 001				
.52	.0000 002	.0000 001	.0000 001		
.53	.0000 004	.0000 002	.0000 001	.0000 001	
.54	.0000 007	.0000 004	.0000 003	.0000 002	
.55	.0000 014	.0000 009	.0000 006	.0000 004	
.56	.0000 028	.0000 018	.0000 012	.0000 007	
.57	.0000 054	.0000 035 ⁺	.0000 023	.0000 015 ⁺	
.58	.0000 101	.0000 067	.0000 045 ⁺	.0000 030	
.59	.0000 187	.0000 127	.0000 086	.0000 058	
.60	.0000 340	.0000 235 ⁺	.0000 162	.0000 112	
.61	.0000 609	.0000 428	.0000 300	.0000 210	
.62	.0001 073	.0000 767	.0000 546	.0000 388	
.63	.0001 859	.0001 349	.0000 976	.0000 705 ⁻	
.64	.0003 170	.0002 336	.0001 717	.0001 259	
.65	.0005 317	.0003 978	.0002 968	.0002 209	
.66	.0008 779	.0006 666	.0005 049	.0003 814	
.67	.0014 266	.0010 991	.0008 447	.0006 476	
.68	.0022 817	.0017 834	.0013 904	.0010 814	
.69	.0035 920	.0028 473	.0022 515 ⁻	.0017 761	
.70	.0055 657	.0044 732	.0035 865 ⁺	.0028 688	
.71	.0084 873	.0069 147	.0056 200	.0045 571	
.72	.0127 366	.0105 159	.0086 619	.0071 184	
.73	.0188 063	.0157 317	.0131 290	.0109 322	
.74	.0273 018	.0231 462	.0195 668	.0165 042	
.75	.0390 281	.0334 862	.0286 665 ⁻	.0244 869	
.76	.0548 267	.0476 227	.0412 740	.0356 951	
.77	.0757 104	.0665 564	.0583 830	.0511 061	
.78	.1027 348	.0913 770	.0811 042	.0718 393	
.79	.1369 341	.1231 917	.1106 028	.0991 037	
.80	.1792 066	.1630 166	.1479 978	.1341 054	
.81	.2301 691	.2116 308	.1942 187	.1779 111	
.82	.2899 910	.2694 034	.2498 277	.2312 674	
.83	.3582 260	.3361 072	.3148 191	.2943 892	
.84	.4336 734	.4107 531	.3884 278	.3667 444	
.85	.5143 065 ⁻	.4914 821	.4689 856	.4468 757	
.86	.5973 087	.5755 633	.5538 779	.5323 146	
.87	.6792 509	.6595 378	.6396 506	.6196 453	
.88	.7564 223	.7395 336	.7223 000	.7047 648	
.89	.8252 931	.8117 372	.7977 472	.7833 505 ⁺	
.90	.8830 421	.8729 610	.8624 402	.8514 920	
.91	.9280 372	.9211 931	.9139 711	.9063 722	
.92	.9601 355 ⁻	.9559 778	.9515 422	.9468 240	
.93	.9806 801	.9784 827	.9761 131	.9735 650 ⁻	
.94	.9921 437	.9911 742	.9901 175 ⁺	.9889 691	
.95	.9974 869	.9971 520	.9967 831	.9963 779	
.96	.9994 323	.9993 509	.9992 604	.9991 598	
.97	.9999 260	.9999 146	.9999 018	.9998 875 ⁺	
.98	.9999 965 ⁻	.9999 959	.9999 952	.9999 945 ⁻	
.99	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

to 70

$q = 9$

$p = 9$ to

$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$
$\cdot 4570\ 5928 \times \frac{1}{10^8}$	$\cdot 3209\ 5512 \times \frac{1}{10^8}$	$\cdot 2285\ 2964 \times \frac{1}{10^8}$	$\cdot 1648\ 1479 \times \frac{1}{10^8}$	$\cdot 1202\ 7876 \times \frac{1}{10^8}$	$\cdot 6615\ 3317 \times \frac{1}{10^8}$
$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 018$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 0000\ 048$	$\cdot 0000\ 019$	$\cdot 0000\ 008$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 0000\ 115$	$\cdot 0000\ 049$	$\cdot 0000\ 020$	$\cdot 0000\ 009$	$\cdot 0000\ 004$	$\cdot 0000\ 001$
$\cdot 0000\ 250$	$\cdot 0000\ 111$	$\cdot 0000\ 049$	$\cdot 0000\ 021$	$\cdot 0000\ 009$	$\cdot 0000\ 002$
$\cdot 0000\ 505$	$\cdot 0000\ 235$	$\cdot 0000\ 108$	$\cdot 0000\ 049$	$\cdot 0000\ 022$	$\cdot 0000\ 004$
$\cdot 0000\ 958$	$\cdot 0000\ 463$	$\cdot 0000\ 222$	$\cdot 0000\ 105$	$\cdot 0000\ 049$	$\cdot 0000\ 011$
$\cdot 0001\ 721$	$\cdot 0000\ 863$	$\cdot 0000\ 428$	$\cdot 0000\ 210$	$\cdot 0000\ 102$	$\cdot 0000\ 024$
$\cdot 0002\ 450^+$	$\cdot 0001\ 530$	$\cdot 0000\ 786$	$\cdot 0000\ 399$	$\cdot 0000\ 201$	$\cdot 0000\ 050$
$\cdot 0004\ 856$	$\cdot 0002\ 600$	$\cdot 0001\ 378$	$\cdot 0000\ 723$	$\cdot 0000\ 376$	$\cdot 0000\ 099$
$\cdot 0007\ 711$	$\cdot 0004\ 253$	$\cdot 0002\ 322$	$\cdot 0001\ 255^+$	$\cdot 0000\ 673$	$\cdot 0000\ 188$
$\cdot 0011\ 859$	$\cdot 0006\ 726$	$\cdot 0003\ 776$	$\cdot 0002\ 100$	$\cdot 0001\ 157$	$\cdot 0000\ 343$
$\cdot 0017\ 723$	$\cdot 0010\ 321$	$\cdot 0005\ 949$	$\cdot 0003\ 397$	$\cdot 0001\ 922$	$\cdot 0000\ 601$
$\cdot 0025\ 815$	$\cdot 0015\ 412$	$\cdot 0009\ 109$	$\cdot 0005\ 333$	$\cdot 0003\ 095$	$\cdot 0001\ 017$
$\cdot 0036\ 733$	$\cdot 0022\ 456$	$\cdot 0013\ 591$	$\cdot 0008\ 148$	$\cdot 0004\ 843$	$\cdot 0001\ 670$
$\cdot 0051\ 170$	$\cdot 0031\ 993$	$\cdot 0019\ 805$	$\cdot 0012\ 146$	$\cdot 0007\ 385$	$\cdot 0002\ 665$
$\cdot 0069\ 608$	$\cdot 0044\ 657$	$\cdot 0028\ 245^+$	$\cdot 0017\ 700$	$\cdot 0010\ 997$	$\cdot 0004\ 144$
$\cdot 0093\ 819$	$\cdot 0061\ 170$	$\cdot 0039\ 492$	$\cdot 0025\ 264$	$\cdot 0016\ 024$	$\cdot 0006\ 295$
$\cdot 0123\ 848$	$\cdot 0082\ 344$	$\cdot 0054\ 218$	$\cdot 0035\ 375$	$\cdot 0022\ 884$	$\cdot 0009\ 354$
$\cdot 0161\ 012$	$\cdot 0109\ 078$	$\cdot 0073\ 184$	$\cdot 0048\ 660$	$\cdot 0032\ 081$	$\cdot 0013\ 622$
$\cdot 0206\ 378$	$\cdot 0142\ 344$	$\cdot 0097\ 243$	$\cdot 0065\ 839$	$\cdot 0044\ 203$	$\cdot 0019\ 467$
$\cdot 0261\ 050$	$\cdot 0183\ 183$	$\cdot 0127\ 329$	$\cdot 0087\ 722$	$\cdot 0059\ 933$	$\cdot 0027\ 339$
$\cdot 0326\ 144$	$\cdot 0232\ 682$	$\cdot 0164\ 451$	$\cdot 0115\ 209$	$\cdot 0080\ 047$	$\cdot 0037\ 768$
$\cdot 0402\ 769$	$\cdot 0291\ 961$	$\cdot 0209\ 680$	$\cdot 0149\ 280$	$\cdot 0105\ 412$	$\cdot 0051\ 382$
$\cdot 0491\ 999$	$\cdot 0362\ 150^+$	$\cdot 0264\ 132$	$\cdot 0190\ 987$	$\cdot 0136\ 982$	$\cdot 0068\ 899$
$\cdot 0594\ 848$	$\cdot 0444\ 367$	$\cdot 0328\ 950^+$	$\cdot 0241\ 441$	$\cdot 0175\ 793$	$\cdot 0091\ 139$
$\cdot 0712\ 244$	$\cdot 0539\ 687$	$\cdot 0405\ 282$	$\cdot 0301\ 791$	$\cdot 0222\ 947$	$\cdot 0119\ 016$
$\cdot 0844\ 999$	$\cdot 0649\ 124$	$\cdot 0494\ 254$	$\cdot 0373\ 208$	$\cdot 0279\ 599$	$\cdot 0153\ 538$
$\cdot 0993\ 789$	$\cdot 0773\ 594$	$\cdot 0596\ 947$	$\cdot 0456\ 857$	$\cdot 0346\ 936$	$\cdot 0195\ 794$
$\cdot 1159\ 125$	$\cdot 0913\ 894$	$\cdot 0714\ 363$	$\cdot 0553\ 875$	$\cdot 0426\ 158$	$\cdot 0246\ 946$
$\cdot 1341\ 335^+$	$\cdot 1070\ 674$	$\cdot 0847\ 405^+$	$\cdot 0665\ 340$	$\cdot 0518\ 448$	$\cdot 0308\ 214$
$\cdot 1540\ 544$	$\cdot 1244\ 411$	$\cdot 0996\ 840$	$\cdot 0792\ 241$	$\cdot 0624\ 947$	$\cdot 0380\ 849$
$\cdot 1756\ 661$	$\cdot 1435\ 387$	$\cdot 1163\ 278$	$\cdot 0935\ 451$	$\cdot 0746\ 723$	$\cdot 0466\ 117$
$\cdot 1989\ 365$	$\cdot 1643\ 673$	$\cdot 1347\ 141$	$\cdot 1095\ 695$	$\cdot 0884\ 741$	$\cdot 0565\ 264$
$\cdot 2238\ 105^+$	$\cdot 1869\ 111$	$\cdot 1548\ 647$	$\cdot 1273\ 522$	$\cdot 1039\ 827$	$\cdot 0679\ 490$
$\cdot 2502\ 097$	$\cdot 2111\ 305^+$	$\cdot 1767\ 785$	$\cdot 1469\ 280$	$\cdot 1212\ 645$	$\cdot 0809\ 916$
$\cdot 2780\ 325$	$\cdot 2369\ 616$	$\cdot 2004\ 302$	$\cdot 1683\ 092$	$\cdot 1403\ 660$	$\cdot 0957\ 546$
$\cdot 3071\ 557$	$\cdot 2643\ 160$	$\cdot 2257\ 694$	$\cdot 1914\ 836$	$\cdot 1613\ 115$	$\cdot 1123\ 234$
$\cdot 3374\ 356$	$\cdot 2930\ 817$	$\cdot 2527\ 203$	$\cdot 2164\ 136$	$\cdot 1841\ 009$	$\cdot 1307\ 650$
$\cdot 3687\ 099$	$\cdot 3231\ 239$	$\cdot 2811\ 814$	$\cdot 2430\ 344$	$\cdot 2087\ 079$	$\cdot 1511\ 243$
$\cdot 4008\ 001$	$\cdot 3542\ 865^+$	$\cdot 3110\ 266$	$\cdot 2712\ 547$	$\cdot 2350\ 781$	$\cdot 1734\ 218$
$\cdot 4335\ 145^+$	$\cdot 3863\ 949$	$\cdot 3421\ 061$	$\cdot 3009\ 563$	$\cdot 2631\ 292$	$\cdot 1976\ 502$
$\cdot 4666\ 509$	$\cdot 4192\ 577$	$\cdot 3742\ 489$	$\cdot 3319\ 955$	$\cdot 2927\ 504$	$\cdot 2237\ 730$
$\cdot 5000\ 000$	$\cdot 4526\ 706$	$\cdot 4072\ 647$	$\cdot 3642\ 351$		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71 \text{ to } .96$ $q = 9$

	$p = 9$	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$
$B(p, q) = .4570\ 5928 \times \frac{1}{10^8}$		$.3209\ 5512 \times \frac{1}{10^8}$	$.2285\ 2964 \times \frac{1}{10^8}$	$.1648\ 1479 \times \frac{1}{10^8}$	$.1202\ 7$
x					
.71	.9673 856	.9598 433	.9512 162	.9414 623	.9305 5
.72	.9738 950 ⁺	.9676 808	.9605 229	.9523 730	.9431 9
.73	.9793 622	.9743 093	.9684 487	.9617 295 ⁺	.9541 0
.74	.9838 988	.9798 474	.9751 161	.9696 546	.9634 1
.75	.9876 152	.9844 149	.9806 522	.9762 795 ⁺	.9712 5
.76	.9906 181	.9881 302	.9851 855 ⁺	.9817 407	.9777 5
.77	.9930 092	.9911 079	.9888 428	.9861 756	.9830 6
.78	.9948 830	.9934 568	.9917 466	.9897 197	.9873 4
.79	.9963 267	.9952 780	.9940 125 ⁺	.9925 030	.9907 2
.80	.9974 185 ⁺	.9966 641	.9957 480	.9946 483	.9933 4
.81	.9982 277	.9976 978	.9970 502	.9962 681	.9953 3
.82	.9988 141	.9984 516	.9980 058	.9974 641	.9968 1
.83	.9992 289	.9989 880	.9986 900	.9983 256	.9978 8
.84	.9995 144	.9993 594	.9991 665 ⁺	.9989 293	.9986 4
.85	.9997 050 ⁻	.9996 088	.9994 885 ⁺	.9993 396	.9991 5
.86	.9998 279	.9997 707	.9996 987	.9996 090	.9994 9
.87	.9999 042	.9998 718	.9998 306	.9997 791	.9997 1
.88	.9999 495 ⁺	.9999 321	.9999 098	.9998 818	.9998 4
.89	.9999 750 ⁺	.9999 662	.9999 549	.9999 407	.9999 2
.90	.9999 885 ⁺	.9999 844	.9999 791	.9999 724	.9999 6
.91	.9999 952	.9999 934	.9999 912	.9999 883	.9999 8
.92	.9999 982	.9999 975 ⁺	.9999 967	.9999 955 ⁺	.9999 9
.93	.9999 994	.9999 992	.9999 989	.9999 985 ⁺	.9999 9
.94	.9999 998	.9999 998	.9999 997	.9999 996	.9999 9
.95	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 9
.96			1.0000 000	1.0000 000	1.0000 0

TABLES OF THE INCOMPLETE β -FUNCTION

0.70

$q = 9$

$p = 13$ to

$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$= .3780\ 1895 \times \frac{1}{10^8}$	$.2233\ 7484 \times \frac{1}{10^8}$	$.1359\ 6729 \times \frac{1}{10^8}$	$.8497\ 9557 \times \frac{1}{10^7}$	$.5438\ 6917 \times \frac{1}{10^7}$	$.3556\ 0676 \times \frac{1}{10^7}$
.0000 001					
.0000 002					
.0000 005 ⁺	.0000 001				
.0000 012	.0000 003	.0000 001			
.0000 025 ⁺	.0000 006	.0000 002			
.0000 051	.0000 014	.0000 004	.0000 001		
.0000 099	.0000 028	.0000 008	.0000 002	.0000 001	
.0000 182	.0000 054	.0000 016	.0000 004	.0000 001	
.0000 325 ⁻	.0000 101	.0000 031	.0000 009	.0000 003	.0000 001
.0000 559	.0000 183	.0000 058	.0000 018	.0000 006	.0000 002
.0000 934	.0000 319	.0000 107	.0000 035 ⁻	.0000 011	.0000 004
.0001 518	.0000 542	.0000 189	.0000 065 ⁻	.0000 022	.0000 007
.0002 403	.0000 894	.0000 325 ⁺	.0000 116	.0000 041	.0000 014
.0003 716	.0001 440	.0000 545 ⁺	.0000 202	.0000 074	.0000 026
.0005 623	.0002 263	.0000 891	.0000 343	.0000 130	.0000 048
.0008 336	.0003 481	.0001 422	.0000 569	.0000 223	.0000 086
.0012 128	.0005 248	.0002 220	.0000 921	.0000 375 ⁻	.0000 150 ⁺
.0017 334	.0007 761	.0003 398	.0001 458	.0000 615 ⁻	.0000 255 ⁻
.0024 367	.0011 275 ⁻	.0005 103	.0002 264	.0000 986	.0000 423
.0033 723	.0016 108	.0007 527	.0003 448	.0001 551	.0000 686
.0045 990	.0022 652	.0010 916	.0005 157	.0002 393	.0001 093
.0061 854	.0031 383	.0015 581	.0007 585 ⁺	.0003 627	.0001 706
.0082 103	.0042 869	.0021 906	.0010 978	.0005 405 ⁻	.0002 618
.0107 627	.0057 779	.0030 363	.0015 649	.0007 925 ⁻	.0003 949
.0139 420	.0076 889	.0041 514	.0021 987	.0011 443	.0005 860
.0178 570	.0101 083	.0056 029	.0030 469	.0016 283	.0008 564
.0226 254	.0131 357	.0074 689	.0041 671	.0022 851	.0012 334
.0283 723	.0168 814	.0098 392	.0056 279	.0031 643	.0017 514
.0352 279	.0214 658	.0128 154	.0075 098	.0043 264	.0024 538
.0433 260	.0270 180	.0165 109	.0099 055 ⁺	.0058 432	.0033 939
.0528 006	.0336 741	.0210 506	.0129 211	.0077 995 ⁻	.0046 361
.0637 832	.0415 753	.0265 692	.0166 751	.0102 934	.0062 579
.0763 989	.0508 648	.0332 098	.0212 986	.0134 372	.0083 504
.0907 630	.0616 846	.0411 221	.0269 339	.0173 569	.0110 192
.1069 769	.0741 720	.0504 588	.0337 330	.0221 923	.0143 853
.1251 243	.0884 554	.0613 728	.0418 553	.0280 954	.0185 849
.1452 670	.1046 499	.0740 130	.0514 642	.0352 291	.0237 690
.1674 414	.1228 528	.0885 196	.0627 239	.0437 641	.0301 019
.1916 552	.1431 394	.1050 198	.0757 948	.0538 761	.0377 593
.2178 843	.1655 580	.1236 222	.0908 285 ⁻	.0657 412	.0469 258
.2460 713	.1901 267	.1444 120	.1079 622	.0795 313	.0577 901
.2761 230	.2168 291	.1674 457	.1273 135 ⁺	.0954 084	.0705 412
.3079 109	.2456 117	.1927 464	.1489 739	.1135 182	.0853 622
.3412 711	.2763 821	.2202 995 ⁺	.1730 032	.1339 838	.1024 230
.3760 057	.3000 078	.2500 000			

TABLE I. THE $I_{\infty}(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 9$

	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$
$B(p, q) = .3780\ 1895 \times \frac{1}{10^6}$		$.2233\ 7484 \times \frac{1}{10^6}$	$.1359\ 6729 \times \frac{1}{10^6}$	$.8497\ 9557 \times \frac{1}{10^6}$	$.5438\ 691$
x					
.71	.8752 216	.8408 276	.8024 536	.7606 772	.7161 852
.72	.8957 771	.8656 964	.8316 623	.7940 886	.7535 090
.73	.9140 268	.8880 842	.8583 243	.8250 130	.7885 372
.74	.9300 225 ⁻	.9079 772	.8823 417	.8532 540	.8209 665
.75	.9438 532	.9254 115 ⁺	.9036 767	.8786 817	.8505 623
.76	.9556 403	.9404 690	.9223 502	.9012 358	.8771 654
.77	.9655 321	.9532 726	.9384 386	.9209 246	.9006 959
.78	.9736 974	.9639 794	.9520 679	.9378 218	.9211 538
.79	.9803 188	.9727 737	.9634 069	.9520 606	.9386 152
.80	.9855 860	.9798 583	.9726 577	.9638 250 ⁺	.9532 258
.81	.9896 893	.9854 467	.9800 465 ⁺	.9733 395 ⁻	.9651 904
.82	.9928 137	.9897 548	.9858 131	.9808 570	.9747 611
.83	.9951 337	.9929 928	.9902 005 ⁻	.9866 467	.9822 223
.84	.9968 092	.9953 596	.9934 461	.9909 815 ⁺	.9878 761
.85	.9979 823	.9970 364	.9957 731	.9941 265 ⁺	.9920 271
.86	.9987 754	.9981 836	.9973 838	.9963 292	.9949 687
.87	.9992 909	.9989 379	.9984 553	.9978 115 ⁺	.9969 714
.88	.9996 112	.9994 119	.9991 363	.9987 645 ⁺	.9982 737
.89	.9997 999	.9996 945 ⁻	.9995 470	.9993 456	.9990 769
.90	.9999 046	.9998 528	.9997 797	.9996 787	.9995 425
.91	.9999 585 ⁻	.9999 353	.9999 022	.9998 561	.9997 931
.92	.9999 838	.9999 746	.9999 612	.9999 424	.9999 164
.93	.9999 946	.9999 914	.9999 867	.9999 800	.9999 707
.94	.9999 985 ⁻	.9999 976	.9999 962	.9999 942	.9999 915
.95	.9999 997	.9999 995 ⁻	.9999 992	.9999 987	.9999 981
.96	1.0000 000	.9999 999	.9999 999	.9999 998	.9999 997
.97		1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$q = 9$					
$p = 2$					
$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$
$q) = .2880\ 9817 \times \frac{1}{10^8}$	$.2118\ 3689 \times \frac{1}{10^8}$	$.1573\ 6455 \times \frac{1}{10^8}$	$.1180\ 2341 \times \frac{1}{10^8}$	$.8931\ 5014 \times \frac{1}{10^9}$	$.6816\ 1458$
.0000 001					
.0000 002	.0000 001				
.0000 003	.0000 001	.0000 001			
.0000 006	.0000 003	.0000 001			
.0000 011	.0000 005 ⁺	.0000 002			
.0000 021	.0000 010	.0000 004	.0000 001		
.0000 038	.0000 018	.0000 008	.0000 002	.0000 001	
.0000 067	.0000 032	.0000 015 ⁺	.0000 004	.0000 002	.0000 001
.0000 116	.0000 057	.0000 028	.0000 007	.0000 003	.0000 002
.0000 196	.0000 099	.0000 050 ⁻	.0000 014	.0000 007	.0000 003
.0000 327	.0000 170	.0000 087	.0000 025 ⁻	.0000 012	.0000 006
.0000 536	.0000 285 ⁻	.0000 150 ⁺	.0000 045 ⁻	.0000 023	.0000 011
.0000 862	.0000 469	.0000 253	.0000 078	.0000 041	.0000 021
.0001 366	.0000 760	.0000 420	.0000 136	.0000 072	.0000 038
.0002 130	.0001 213	.0000 685 ⁺	.0000 230	.0000 125 ⁺	.0000 068
.0003 273	.0001 905 ⁺	.0001 100	.0000 384	.0000 214	.0000 118
.0004 957	.0002 948	.0001 739	.0000 631	.0000 359	.0000 203
.0007 402	.0004 495 ⁺	.0002 709	.0001 019	.0000 592	.0000 342
.0010 905 ⁻	.0006 759	.0004 157	.0001 620	.0000 962	.0000 568
.0015 854	.0010 026	.0006 291	.0002 538	.0001 539	.0000 927
.0022 757	.0014 675 ⁺	.0009 391	.0003 919	.0002 425 ⁻	.0001 490
.0032 260	.0021 205 ⁺	.0013 833	.0005 966	.0003 764	.0002 360
.0045 177	.0030 257	.0020 111	.0008 959	.0005 763	.0003 683
.0062 520	.0042 645 ⁺	.0028 871	.0013 272	.0008 700	.0005 666
.0085 520	.0059 388	.0040 934	.0019 407	.0012 958	.0008 597
.0115 658	.0081 735 ⁺	.0057 336	.0028 016	.0019 048	.0012 869
.0154 681	.0111 200	.0079 359	.0039 941	.0027 640	.0019 008
.0204 612	.0149 581	.0108 562	.0056 245 ⁻	.0039 602	.0027 712
.0267 757	.0198 976	.0146 809	.0078 253	.0056 041	.0039 888
.0346 684	.0261 791	.0196 292	.0107 587	.0078 339	.0056 695 ⁺
.0444 197	.0340 721	.0259 532	.0146 198	.0108 198	.0079 593
.0563 276	.0438 725 ⁺	.0339 372	.0196 385 ⁻	.0147 671	.0110 380
.0707 003	.0558 968	.0438 946	.0260 809	.0199 194	.0151 240
.0878 455 ⁺	.0704 735 ⁺	.0561 617	.0342 484	.0265 590	.0204 764
.1080 576	.0879 324	.0710 891	.0444 737	.0350 065 ⁻	.0273 968
.1316 021	.1085 895 ⁺	.0890 288	.0571 154	.0456 170	.0362 280
.1586 983	.1327 309	.1103 191	.0725 471	.0587 731	.0473 502
.1895 004	.1605 926	.1352 649	.0911 445 ⁻	.0748 735 ⁻	.0611 722
.2240 784	.1923 395 ⁺	.1641 163	.1132 673	.0943 180	.0781 196
.2624 004	.2280 444	.1970 448	.1392 381	.1174 874	.0986 168
.3043 157	.2676 667	.2341 188	.1693 173	.1447 191	.1230 642
.3495 437	.3110 349	.2752 809	.2036 772	.1762 797	.1518 110
.3976 669	.3578 329	.3203 276	.2423 740	.2123 347	.1851 233
.4481 317	.4075 934	.3688 950 ⁺	.2853 227	.2529 182	.2231 507
.5002 568	.4596 992	.4204 519	.3322 748	.2979 042	.2658 921
.5532 514	.5133 938	.4743 027	.3828 035 ⁺	.3469 838	.3131 651
.6062 421	.5678 041	.5296 027	.4362 975 ⁻	.3996 496	.3645 813
.6583 080	.6219 719	.5853 843	.4919 672	.4551 919	.4195 226
.7082 008			.5488 666		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .37 \text{ to } .99$ $q = 9$

	$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$
$B(p, q) = .5243 \text{ } 1891 \times \frac{1}{10^8}$	$.4063 \text{ } 4716 \times \frac{1}{10^8}$	$.3171 \text{ } 4900 \times \frac{1}{10^8}$	$.2491 \text{ } 8850 \times \frac{1}{10^8}$	$.1970 \text{ } 3$	
.37	.0000 001				
.38	.0000 001	.0000 001			
.39	.0000 003	.0000 001	.0000 001		
.40	.0000 006	.0000 003	.0000 001	.0000 001	
.41	.0000 011	.0000 005+	.0000 003	.0000 001	.0000 001
.42	.0000 020	.0000 010	.0000 005+	.0000 003	.0000 001
.43	.0000 036	.0000 019	.0000 010	.0000 005+	.0000 001
.44	.0000 065+	.0000 036	.0000 019	.0000 010	.0000 001
.45	.0000 114	.0000 064	.0000 035+	.0000 020	.0000 001
.46	.0000 196	.0000 112	.0000 064	.0000 036	.0000 010
.47	.0000 333	.0000 194	.0000 113	.0000 065-	.0000 036
.48	.0000 555-	.0000 330	.0000 195+	.0000 115+	.0000 065
.49	.0000 910	.0000 553	.0000 334	.0000 201	.0000 115
.50	.0001 470	.0000 911	.0000 561	.0000 344	.0000 210
.51	.0002 340	.0001 478	.0000 928	.0000 580	.0000 360
.52	.0003 668	.0002 361	.0001 512	.0000 963	.0000 610
.53	.0005 670	.0003 718	.0002 425-	.0001 573	.0001 010
.54	.0008 642	.0005 771	.0003 833	.0002 533	.0001 660
.55	.0012 994	.0008 833	.0005 973	.0004 018	.0002 690
.56	.0019 277	.0013 335+	.0009 176	.0006 282	.0004 280
.57	.0028 225-	.0019 862	.0013 903	.0009 683	.0006 710
.58	.0040 794	.0029 192	.0020 780	.0014 718	.0010 370
.59	.0058 215+	.0042 348	.0030 646	.0022 067	.0015 810
.60	.0082 039	.0060 646	.0044 602	.0032 641	.0023 770
.61	.0114 187	.0085 753	.0064 071	.0047 639	.0035 250
.62	.0156 995-	.0119 735+	.0090 859	.0068 616	.0051 580
.63	.0213 242	.0165 112	.0127 210	.0097 542	.0074 450
.64	.0286 167	.0224 883	.0175 856	.0136 872	.0106 050
.65	.0379 453	.0302 545+	.0240 058	.0189 594	.0149 070
.66	.0497 179	.0402 071	.0323 608	.0259 267	.0206 810
.67	.0643 725+	.0527 851	.0430 806	.0350 024	.0283 160
.68	.0823 629	.0684 579	.0566 388	.0466 533	.0382 650
.69	.1041 378	.0877 085-	.0735 382	.0613 904	.0510 360
.70	.1301 153	.1110 092	.0942 913	.0797 518	.0671 790
.71	.1606 511	.1387 920	.1193 920	.1022 788	.0872 690
.72	.1960 027	.1714 119	.1492 802	.1294 824	.1118 740
.73	.2362 915+	.2091 068	.1843 007	.1618 023	.1415 140
.74	.2814 656	.2519 545-	.2246 566	.1995 592	.1766 170
.75	.3312 665-	.2998 323	.2703 628	.2429 025+	.2174 610
.76	.3852 046	.3523 826	.3212 017	.2917 593	.2641 180
.77	.4425 481	.4089 893	.3766 890	.3457 884	.3163 960
.78	.5023 283	.4687 716	.4360 538	.4043 472	.3737 970
.79	.5633 666	.5305 981	.4982 393	.4664 785+	.4354 830
.80	.6243 234	.5931 271	.5619 309	.5309 237	.5002 870

TABLES OF THE INCOMPLETE β -FUNCTION

	$q = 9$						p
	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$1449 \times \frac{1}{10^8}$	$10085274 \times \frac{1}{10^8}$	$81540514 \times \frac{1}{10^{10}}$	$66251667 \times \frac{1}{10^{10}}$	$54082994 \times \frac{1}{10^{10}}$	$44348055 \times \frac{1}{10^{10}}$	3652	
001	0000 001						
002	0000 002	0000 001	0000 001				
003	0000 003	0000 002	0000 001	0000 001			
004	0000 007	0000 004	0000 002	0000 001	0000 001		
005	0000 013	0000 008	0000 004	0000 003	0000 001	0000 001	
006	0000 025	0000 015	0000 009	0000 005	0000 003	0000 001	
007	0000 046	0000 028	0000 017	0000 010	0000 006	0000 001	
008							
009	0000 084	0000 051	0000 031	0000 019	0000 011	0000 001	
010	0000 151	0000 094	0000 058	0000 036	0000 022	0000 001	
011	0000 266	0000 169	0000 107	0000 067	0000 042	0000 001	
012	0000 461	0000 298	0000 192	0000 123	0000 079	0000 001	
013	0000 785 ⁺	0000 517	0000 339	0000 221	0000 144	0000 001	
014	0001 318	0000 882	0000 589	0000 391	0000 259	0000 001	
015	0002 176	0001 483	0001 006	0000 681	0000 459	0000 001	
016	0003 539	0002 453	0001 693	0001 165	0000 798	0000 001	
017	0005 671	0003 996	0002 805 ⁺	0001 962	0001 368	0000 001	
018	0008 952	0006 412	0004 576	0003 253	0002 305 ⁺	0001 001	
019							
020	0013 927	0010 137	0007 351	0005 311	0003 825	0002 001	
021	0021 356	0015 791	0011 633	0008 539	0006 247	0004 001	
022	0032 281	0024 241	0018 136	0013 521	0010 046	0007 001	
023	0048 108	0036 677	0027 860	0021 089	0015 910	0011 001	
024	0070 690	0054 700	0042 175	0032 405	0024 815 ⁺	0018 001	
025	0102 424	0080 419	0062 917	0049 056	0038 122	0029 001	
026	0146 339	0116 554	0092 504	0073 169	0057 686	0045 001	
027	0206 178	0166 530	0134 039	0107 527	0085 981	0068 001	
028	0286 445 ⁺	0234 559	0191 414	0155 690	0126 230	0102 001	
029	0392 413	0325 679	0269 383	0222 094	0182 533	0149 001	
030							
031	0530 053	0445 734	0373 587	0312 117	0259 958	0215 801	
032	0705 886	0601 273	0510 501	0432 074	0364 589	0306 741	
033	0926 703	0799 331	0687 277	0589 118	0503 480	0429 001	
034	1199 170	1047 082	0911 451	0791 011	0684 495	0590 601	
035	1529 294	1351 337	1190 490	1045 729	0915 973	0800 101	
036	1921 761	1717 895	1531 174	1360 884	1206 211	1066 201	
037	2379 189	2150 773	1938 815	1742 965	1562 736	1397 521	
038	2901 353	2651 360	2416 366	2196 413	1991 373	1800 971	
039	3484 467	3217 577	2963 484	2722 604	2495 179	2281 291	
040	4120 645	3843 173	3575 663	3318 852	3073 316	2839 471	
041							
042	4797 657	4517 281	4243 590	3977 563	3720 035 ⁺	3471 701	
043	5499 117	5224 386	4952 895 ⁺	4685 748	4423 945	4168 371	
044	6205 179	5944 842	5684 438	5425 075 ⁺	5167 800	4913 581	
045	6893 812	6656 007	6415 274	6172 617	5929 012	5685 401	
046	7542 564	7333 986	7120 327	6902 395	6681 007	6450 981	
047	8130 702	7955 870	7774 671	7587 675	7395 479	7198 521	
048	8641 427	8502 101	8275 218				

TABLE I. THE $I_x(p, q)$ FUNCTION

to .99

 $q = 9$

$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$\cdot 3020\ 0825 \times \frac{1}{10^{10}}$	$\cdot 2507\ 2383 \times \frac{1}{10^{10}}$	$\cdot 2089\ 3652 \times \frac{1}{10^{10}}$	$\cdot 1747\ 4691 \times \frac{1}{10^{10}}$	$\cdot 1466\ 6259 \times \frac{1}{10^{10}}$	$\cdot 1235\ 0533 \times \frac{1}{10^{10}}$
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$			
$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 008$	$\cdot 0000\ 005^+$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 0000\ 016$	$\cdot 0000\ 010$	$\cdot 0000\ 006$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 032$	$\cdot 0000\ 020$	$\cdot 0000\ 013$	$\cdot 0000\ 008$	$\cdot 0000\ 005^-$	$\cdot 0000\ 003$
$\cdot 0000\ 060$	$\cdot 0000\ 039$	$\cdot 0000\ 025^-$	$\cdot 0000\ 016$	$\cdot 0000\ 010$	$\cdot 0000\ 007$
$\cdot 0000\ 112$	$\cdot 0000\ 074$	$\cdot 0000\ 048$	$\cdot 0000\ 031$	$\cdot 0000\ 020$	$\cdot 0000\ 013$
$\cdot 0000\ 206$	$\cdot 0000\ 138$	$\cdot 0000\ 092$	$\cdot 0000\ 061$	$\cdot 0000\ 040$	$\cdot 0000\ 026$
$\cdot 0000\ 371$	$\cdot 0000\ 252$	$\cdot 0000\ 171$	$\cdot 0000\ 115^+$	$\cdot 0000\ 077$	$\cdot 0000\ 052$
$\cdot 0000\ 658$	$\cdot 0000\ 454$	$\cdot 0000\ 313$	$\cdot 0000\ 214$	$\cdot 0000\ 147$	$\cdot 0000\ 100$
$\cdot 0001\ 146$	$\cdot 0000\ 804$	$\cdot 0000\ 563$	$\cdot 0000\ 393$	$\cdot 0000\ 273$	$\cdot 0000\ 190$
$\cdot 0001\ 964$	$\cdot 0001\ 401$	$\cdot 0000\ 996$	$\cdot 0000\ 706$	$\cdot 0000\ 499$	$\cdot 0000\ 352$
$\cdot 0003\ 311$	$\cdot 0002\ 399$	$\cdot 0001\ 733$	$\cdot 0001\ 249$	$\cdot 0000\ 897$	$\cdot 0000\ 643$
$\cdot 0005\ 493$	$\cdot 0004\ 043$	$\cdot 0002\ 967$	$\cdot 0002\ 171$	$\cdot 0001\ 585^-$	$\cdot 0001\ 154$
$\cdot 0008\ 909$	$\cdot 0006\ 703$	$\cdot 0004\ 995^+$	$\cdot 0003\ 712$	$\cdot 0002\ 751$	$\cdot 0002\ 034$
$\cdot 0014\ 415^-$	$\cdot 0010\ 937$	$\cdot 0008\ 274$	$\cdot 0006\ 242$	$\cdot 0004\ 697$	$\cdot 0003\ 525^+$
$\cdot 0022\ 807$	$\cdot 0017\ 561$	$\cdot 0013\ 484$	$\cdot 0010\ 325^-$	$\cdot 0007\ 885^+$	$\cdot 0006\ 006$
$\cdot 0035\ 523$	$\cdot 0027\ 753$	$\cdot 0021\ 621$	$\cdot 0016\ 798$	$\cdot 0013\ 017$	$\cdot 0010\ 061$
$\cdot 0054\ 471$	$\cdot 0043\ 166$	$\cdot 0034\ 112$	$\cdot 0026\ 885^-$	$\cdot 0021\ 133$	$\cdot 0016\ 571$
$\cdot 0082\ 228$	$\cdot 0066\ 079$	$\cdot 0052\ 955^+$	$\cdot 0042\ 325^+$	$\cdot 0033\ 742$	$\cdot 0026\ 832$
$\cdot 0122\ 195^+$	$\cdot 0099\ 552$	$\cdot 0080\ 885^-$	$\cdot 0065\ 544$	$\cdot 0052\ 979$	$\cdot 0042\ 716$
$\cdot 0178\ 746$	$\cdot 0147\ 595^-$	$\cdot 0121\ 545^+$	$\cdot 0099\ 834$	$\cdot 0081\ 795^-$	$\cdot 0066\ 852$
$\cdot 0257\ 347$	$\cdot 0215\ 315^+$	$\cdot 0179\ 672$	$\cdot 0149\ 546$	$\cdot 0124\ 163$	$\cdot 0102\ 841$
$\cdot 0304\ 620$	$\cdot 0309\ 028$	$\cdot 0261\ 232$	$\cdot 0220\ 272$	$\cdot 0185\ 283$	$\cdot 0155\ 483$
$\cdot 0508\ 302$	$\cdot 0436\ 276$	$\cdot 0373\ 502$	$\cdot 0318\ 971$	$\cdot 0271\ 749$	$\cdot 0230\ 981$
$\cdot 0697\ 063$	$\cdot 0605\ 718$	$\cdot 0525\ 030$	$\cdot 0453\ 990$	$\cdot 0391\ 641$	$\cdot 0337\ 085^-$
$\cdot 0940\ 126$	$\cdot 0826\ 827$	$\cdot 0725\ 411$	$\cdot 0634\ 931$	$\cdot 0554\ 461$	$\cdot 0483\ 111$
$\cdot 1246\ 646$	$\cdot 1109\ 346$	$\cdot 0984\ 830$	$\cdot 0872\ 278$	$\cdot 0770\ 862$	$\cdot 0679\ 757$
$\cdot 1624\ 842$	$\cdot 1462\ 476$	$\cdot 1313\ 316$	$\cdot 1176\ 737$	$\cdot 1052\ 072$	$\cdot 0938\ 627$
$\cdot 2080\ 881$	$\cdot 1893\ 773$	$\cdot 1719\ 678$	$\cdot 1558\ 225^-$	$\cdot 1408\ 966$	$\cdot 1271\ 399$
$\cdot 2617\ 593$	$\cdot 2407\ 816$	$\cdot 2210\ 160$	$\cdot 2024\ 534$	$\cdot 1850\ 757$	$\cdot 1688\ 566$
$\cdot 3233\ 135^-$	$\cdot 3004\ 758$	$\cdot 2786\ 887$	$\cdot 2579\ 720$	$\cdot 2383\ 352$	$\cdot 2197\ 784$
$\cdot 3919\ 817$	$\cdot 3678\ 943$	$\cdot 3446\ 312$	$\cdot 3222\ 379$	$\cdot 3007\ 499$	$\cdot 2801\ 930$
$\cdot 4663\ 337$	$\cdot 4417\ 863$	$\cdot 4177\ 899$	$\cdot 3944\ 091$	$\cdot 3716\ 998$	$\cdot 3497\ 097$
$\cdot 5442\ 708$	$\cdot 5201\ 775^-$	$\cdot 4963\ 412$	$\cdot 4728\ 365^-$	$\cdot 4497\ 318$	$\cdot 4270\ 893$
$\cdot 6231\ 138$	$\cdot 6004\ 265^+$	$\cdot 5777\ 140$	$\cdot 5550\ 509$	$\cdot 5325\ 083$	$\cdot 5101\ 536$
$\cdot 6997\ 999$	$\cdot 6794\ 007$	$\cdot 6587\ 386$	$\cdot 6378\ 789$	$\cdot 6168\ 860$	$\cdot 5958\ 232$
$\cdot 7711\ 856$	$\cdot 7537\ 730$	$\cdot 7359\ 308$	$\cdot 7177\ 084$	$\cdot 6991\ 566$	$\cdot 6803\ 264$
$\cdot 8344\ 239$	$\cdot 8204\ 152$	$\cdot 8058\ 060$	$\cdot 7908\ 970$	$\cdot 7754\ 512$	$\cdot 7595\ 936$
$\cdot 8873\ 570$	$\cdot 8768\ 320$	$\cdot 8657\ 994$	$\cdot 8542\ 728$	$\cdot 8422\ 679$	$\cdot 8298\ 029$
$\cdot 9288\ 437$	$\cdot 9215\ 458$	$\cdot 9138\ 100$	$\cdot 9056\ 370$	$\cdot 8970\ 292$	$\cdot 8879\ 911$
$\cdot 9589\ 318$	$\cdot 9543\ 341$	$\cdot 9494\ 065^+$	$\cdot 9441\ 425^+$	$\cdot 9385\ 370$	$\cdot 9325\ 857$
$\cdot 9788\ 088$	$\cdot 9754\ 088$				

TABLES OF THE INCOMPLETE β -FUNCTION

6 to 70

$q = 9.5$

$p = 9.5$

$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$
$q = .2222\ 7212 \times \frac{1}{10^8}$	$.1561\ 4033 \times \frac{1}{10^8}$	$.1111\ 3606 \times \frac{1}{10^8}$	$.8007\ 1963 \times \frac{1}{10^8}$	$.4296\ 5443 \times \frac{1}{10^8}$	$.2398\ 0713 \times \frac{1}{10^8}$
.0000 001					
.0000 003	.0000 001				
.0000 010	.0000 004	.0000 001	.0000 001		
.0000 027	.0000 011	.0000 004	.0000 002		
.0000 067	.0000 029	.0000 012	.0000 005+	.0000 001	
.0000 152	.0000 068	.0000 030	.0000 013	.0000 002	
.0000 320	.0000 149	.0000 069	.0000 031	.0000 006	.0000 001
.0000 628	.0000 305-	.0000 146	.0000 069	.0000 015+	.0000 003
.0001 165+	.0000 586	.0000 292	.0000 144	.0000 034	.0000 008
.0002 056	.0001 070	.0000 551	.0000 281	.0000 071	.0000 018
.0003 476	.0001 866	.0000 992	.0000 522	.0000 141	.0000 037
.0005 657	.0003 128	.0001 713	.0000 929	.0000 267	.0000 074
.0008 899	.0005 061	.0002 850+	.0001 590	.0000 483	.0000 142
.0013 585-	.0007 932	.0004 586	.0002 628	.0000 841	.0000 261
.0020 180	.0012 081	.0007 162	.0004 208	.0001 416	.0000 462
.0029 247	.0017 928	.0010 884	.0006 548	.0002 312	.0000 792
.0041 447	.0025 985+	.0016 136	.0009 930	.0003 669	.0001 316
.0057 542	.0036 859	.0023 386	.0014 706	.0005 674	.0002 125-
.0078 394	.0051 254	.0033 195+	.0021 309	.0008 569	.0003 345+
.0104 958	.0069 979	.0046 222	.0030 263	.0012 661	.0005 144
.0138 273	.0093 935+	.0063 224	.0042 184	.0018 332	.0007 737
.0179 450+	.0124 120	.0085 063	.0057 793	.0026 047	.0011 404
.0229 655+	.0161 609	.0112 692	.0077 910	.0036 304	.0016 492
.0290 086	.0207 546	.0147 155+	.0103 454	.0049 941	.0023 429
.0361 950+	.0263 122	.0189 575-	.0135 440	.0067 537	.0032 736
.0446 435+	.0329 556	.0241 133	.0174 970	.0090 019	.0045 030
.0544 683	.0408 066	.0303 053	.0223 216	.0118 356	.0061 032
.0657 756	.0499 845-	.0376 576	.0281 403	.0153 615-	.0081 574
.0786 609	.0606 027	.0462 934	.0350 791	.0196 953	.0107 599
.0932 057	.0727 658	.0563 322	.0432 644	.0249 602	.0140 157
.1094 748	.0865 665-	.0678 862	.0528 207	.0312 847	.0180 401
.1275 135+	.1020 820	.0810 574	.0638 667	.0388 009	.0229 573
.1473 453	.1193 717	.0959 342	.0765 127	.0476 413	.0288 990
.1689 699	.1384 739	.1125 881	.0908 567	.0579 358	.0360 023
.1923 621	.1594 040	.1310 709	.1069 810	.0698 084	.0444 071
.2174 706	.1821 521	.1514 116	.1249 493	.0833 732	.0542 527
.2442 178	.2066 820	.1736 144	.1448 030	.0987 312	.0656 747
.2725 002	.2329 302	.1976 569	.1665 589	.1159 658	.0788 010
.3021 890	.2608 058	.2234 884	.1902 069	.1351 397	.0937 476
.3331 321	.2901 909	.2510 297	.2157 081	.1562 912	.1106 145-
.3651 559	.3209 418	.2801 730	.2429 940	.1794 311	.1294 813
.3980 682	.3528 911	.3107 827	.2719 658	.2045 404	.1504 033
.4316 610	.3858 496	.3426 968	.3024 951	.2315 680	.1734 078
.4657 143	.4196 096	.3757 291	.3344 248	.2604 301	.1984 004
.5000 000	.4539 484	.4006 722			

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.96$ $q = 9.5$

	$p = 9.5$	$p = 10$	$p = 10.5$	$p = 11$	$p =$
$B(p, q) = .2222\ 7212 \times \frac{1}{10^8}$		$.1561\ 4033 \times \frac{1}{10^8}$	$.1111\ 3606 \times \frac{1}{10^8}$	$.8007\ 1963 \times \frac{1}{10^8}$	$.4296$
.71	.9709 914	.9643 319	.9566 983	.9480 446	.9275
.72	.9770 345 ⁻	.9716 053	.9653 381	.9581 834	.9410
.73	.9820 550 ⁻	.9776 900	.9726 162	.9667 839	.9526
.74	.9861 727	.9827 148	.9786 679	.9739 841	.9625
.75	.9895 042	.9868 077	.9836 307	.9799 287	.9707
.76	.9921 606	.9900 930	.9876 407	.9847 642	.9775
.77	.9942 458	.9926 889	.9908 302	.9886 356	.9831
.78	.9958 553	.9947 057	.9933 242	.9916 826	.9875
.79	.9970 753	.9962 442	.9952 391	.9940 370	.9909
.80	.9979 820	.9973 949	.9966 803	.9958 203	.9935
.81	.9986 415 ⁺	.9982 371	.9977 417	.9971 419	.9955
.82	.9991 101	.9988 390	.9985 051	.9980 982	.9970
.83	.9994 343	.9992 583	.9990 400	.9987 724	.9980
.84	.9996 524	.9995 418	.9994 040	.9992 339	.9987
.85	.9997 944	.9997 276	.9996 438	.9995 398	.9992
.86	.9998 835 ⁻	.9998 448	.9997 961	.9997 353	.9995
.87	.9999 372	.9999 159	.9998 889	.9998 551	.9997
.88	.9999 680	.9999 569	.9999 429	.9999 251	.9998
.89	.9999 848	.9999 794	.9999 725 ⁺	.9999 638	.9999
.90	.9999 933	.9999 909	.9999 878	.9999 838	.9999
.91	.9999 973	.9999 963	.9999 951	.9999 934	.9999
.92	.9999 990	.9999 987	.9999 982	.9999 976	.9999
.93	.9999 997	.9999 996	.9999 995 ⁻	.9999 993	.9999
.94	.9999 999	.9999 999	.9999 999	.9999 998	.9999
.95	1.0000 000	1.0000 000	1.0000 000	1.0000 000	.9999
.96					1.0000

10-70

$$p = 14 \text{ t}$$

1969 614	*I496 360	*IIr8 230	*0822 934	*0597 033	*0427 419
*2245 436	*I734 828	*I318 853	*0987 633	*0729 281	*0531 498
*2342 108	*I996 299	*I543 095-	*II75 292	*0882 888	*0654 733
*2858 309	*2280 465+	*I791 440	*I387 077	*I059 543	*0799 153
*3193 107	*2586 587	*2003 968	*I623 825+	*I260 503	*0966 683
*3543 961	*2913 465+	*2360 311	*I885 981	*I487 544	*I159 054
*3908 742	*3259 439	*2679 611	*2173 531	*I740 832	*I377 725+
*4284 771	*3022 388	*3020 502	*2488 771		
*4664 761					

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 9.5$

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$B(p, q) = .1385\ 5523 \times \frac{1}{10^4}$	$.8254\ 3540 \times \frac{1}{10^7}$	$.5053\ 6861 \times \frac{1}{10^7}$	$.3170\ 9403 \times \frac{1}{10^7}$	$.2034\ 18$	
x					
.71	.8734 835 ⁻	.8401 679	.8031 100	.7628 210	.7199 13
.72	.8948 900	.8658 561	.8331 059	.7969 988	.7580 03
.73	.9138 203	.8888 901	.8603 783	.8285 075 ⁺	.7936 09
.74	.9303 328	.9092 592	.8848 278	.8571 439	.8264 14
.75	.9445 292	.9270 091	.9064 230	.8827 811	.8561 84
.76	.9565 478	.9422 376	.9251 989	.9053 701	.8827 65
.77	.9665 570	.9550 878	.9412 521	.9249 389	.9060 97
.78	.9747 474	.9657 402	.9547 334	.9415 872	.9262 06
.79	.9813 239	.9744 038	.9658 390	.9554 783	.9432 00
.80	.9864 975 ⁻	.9813 060	.9747 993	.9668 286	.9572 63
.81	.9904 780	.9866 831	.9818 674	.9758 944	.9686 37
.82	.9934 670	.9907 709	.9873 074	.9829 585 ⁻	.9776 09
.83	.9956 523	.9937 962	.9913 826	.9883 151	.9844 96
.84	.9972 034	.9959 695 ⁻	.9943 456	.9922 569	.9896 25
.85	.9982 687	.9974 799	.9964 295 ⁻	.9950 622	.9933 19
.86	.9989 738	.9984 913	.9978 413	.9969 853	.9958 81
.87	.9994 212	.9991 406	.9987 583	.9982 489	.9975 84
.88	.9996 918	.9995 379	.9993 257	.9990 398	.9986 62
.89	.9998 465 ⁺	.9997 676	.9996 577	.9995 078	.9993 07
.90	.9999 295 ⁻	.9998 922	.9998 396	.9997 671	.9996 69
.91	.9999 706	.9999 546	.9999 317	.9999 000	.9998 56
.92	.9999 891	.9999 830	.9999 742	.9999 619	.9999 44
.93	.9999 965 ⁺	.9999 945 ⁺	.9999 916	.9999 875 ⁻	.9999 81
.94	.9999 991	.9999 986	.9999 978	.9999 966	.9999 95
.95	.9999 998	.9999 997	.9999 995 ⁺	.9999 993	.9999 99
.96	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 99
.97			1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

2 to 80

$q = 9.5$

$p = 20$

$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$q = .8876\ 4573 \times \frac{1}{10^8}$	$.6017\ 9371 \times \frac{1}{10^8}$	$.4143\ 4977 \times \frac{1}{10^8}$	$.2893\ 8714 \times \frac{1}{10^8}$	$.2047\ 9705 \times \frac{1}{10^8}$	$.1467\ 2028 \times \frac{1}{10^8}$
.0000 001					
.0000 001					
.0000 003	.0000 001				
.0000 005 ⁺	.0000 002	.0000 001			
.0000 010	.0000 004	.0000 001			
.0000 019	.0000 007	.0000 003	.0000 001		
.0000 036	.0000 014	.0000 005 ⁺	.0000 002	.0000 001	
.0000 065 ⁻	.0000 026	.0000 010	.0000 004	.0000 002	.0000 001
.0000 114	.0000 048	.0000 020	.0000 008	.0000 003	.0000 001
.0000 196	.0000 085 ⁻	.0000 036	.0000 015 ⁺	.0000 006	.0000 003
.0000 330	.0000 147	.0000 065 ⁻	.0000 028	.0000 012	.0000 005 ⁺
.0000 544	.0000 249	.0000 113	.0000 051	.0000 022	.0000 010
.0000 879	.0000 415 ⁺	.0000 194	.0000 089	.0000 041	.0000 018
.0001 393	.0000 677	.0000 325 ⁺	.0000 154	.0000 073	.0000 034
.0002 169	.0001 084	.0000 535 ⁺	.0000 261	.0000 126	.0000 060
.0003 321	.0001 704	.0000 864	.0000 433	.0000 215 ⁺	.0000 106
.0005 002	.0002 635 ⁻	.0001 372	.0000 706	.0000 360	.0000 182
.0007 417	.0004 008	.0002 140	.0001 130	.0000 591	.0000 306
.0010 835 ⁺	.0006 001	.0003 284	.0001 778	.0000 952	.0000 505 ⁺
.0015 605 ⁻	.0008 852	.0004 962	.0002 752	.0001 510	.0000 821
.0022 167	.0012 871	.0007 387	.0004 193	.0002 356	.0001 311
.0031 073	.0018 458	.0010 837	.0006 294	.0003 619	.0002 061
.0043 005 ⁺	.0026 118	.0015 680	.0009 312	.0005 475 ⁺	.0003 189
.0058 790	.0036 483	.0022 383	.0013 586	.0008 164	.0004 860
.0079 413	.0050 331	.0031 538	.0019 554	.0012 004	.0007 300
.0106 038	.0068 601	.0043 883	.0027 777	.0017 410	.0010 811
.0140 009	.0092 412	.0060 317	.0038 960	.0024 919	.0015 793
.0182 858	.0123 077	.0081 927	.0053 973	.0035 214	.0022 766
.0236 299	.0162 109	.0110 000	.0073 878	.0049 143	.0032 395 ^e
.0302 217	.0211 226	.0146 038	.0099 947	.0067 753	.0045 519
.0382 641	.0272 337	.0191 763	.0133 677	.0092 309	.0063 179
.0479 713	.0347 529	.0249 116	.0176 804	.0124 315 ⁻	.0086 643
.0595 638	.0439 034	.0320 238	.0231 303	.0165 530	.0117 433
.0732 624	.0540 180	.0407 448	.0299 377	.0217 971	.0157 341
.0892 805 ⁺	.0680 338	.0513 198	.0383 436	.0283 914	.0208 443
.1078 162	.0834 842	.0640 013	.0486 053	.0365 864	.0273 093
.1290 425 ⁺	.1014 902	.0790 416	.0609 909	.0466 523	.0353 906
.1530 973	.1222 500 ⁻	.0966 834	.0757 712	.0588 731	.0453 723
.1800 732	.1459 283	.1171 491	.0932 100	.0735 383	.0575 551
.2100 077	.1726 448	.1406 283	.1135 526	.0909 326	.0722 475 ⁻
.2428 739	.2024 621	.1672 653	.1370 121	.1113 232	.0897 552
.2785 730	.2353 756	.1971 459	.1637 557	.1349 458	.1103 673
.3169 287	.2713 036	.2302 845 ⁻	.1938 893	.1619 882	.1343 406
.3576 842	.3100 801	.2666 131	.2274 434	.1925 738	.1618 813
.4005 028	.3514 505 ⁺	.3050 721	.2666 131		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.98$ $q = 9.5$

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$B(p, q) = .8876\ 4573 \times \frac{1}{10^8}$		$.6017\ 9371 \times \frac{1}{10^8}$	$.4143\ 4977 \times \frac{1}{10^8}$	$.2893\ 8714 \times \frac{1}{10^8}$	$.2047\ 97$
$\frac{x}{.81}$					
.81	.9498 372	.9381 263	.9248 010	.9098 372	.8932 37
.82	.9634 874	.9545 318	.9442 157	.9324 883	.9193 17
.83	.9742 232	.9675 926	.9598 615 ⁺	.9509 656	.9408 53
.84	.9824 135 ⁺	.9776 770	.9720 880	.9655 793	.9580 91
.85	.9884 538	.9852 031	.9813 217	.9767 477	.9714 23
.86	.9927 429	.9906 102	.9880 338	.9849 620	.9813 44
.87	.9956 606	.9943 315 ⁻	.9927 070	.9907 478	.9884 13
.88	.9975 507	.9967 698	.9958 044	.9946 267	.9932 07
.89	.9987 078	.9982 795 ⁻	.9977 440	.9970 833	.9962 77
.90	.9993 708	.9991 542	.9988 804	.9985 388	.9981 17
.91	.9997 219	.9996 226	.9994 957	.9993 356	.9991 36
.92	.9998 909	.9998 506	.9997 984	.9997 319	.9996 48
.93	.9999 632	.9999 491	.9999 307	.9999 070	.9998 76
.94	.9999 868	.9999 858	.9999 804	.9999 735 ⁺	.9999 64
.95	.9999 978	.9999 970	.9999 958	.9999 942	.9999 92
.96	.9999 997	.9999 996	.9999 994	.9999 991	.9999 98
.97	1.0000 000	1.0000 000	1.0000 000	.9999 999	.9999 99
.98				1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

$\cdot 30$ to $\cdot 98$

$q = 9.5$

$p = 2$

	$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$
$p, q) = \cdot 1063\ 1904 \times \frac{1}{10^8}$	$\cdot 7786\ 7467 \times \frac{1}{10^8}$	$\cdot 5760\ 0592 \times \frac{1}{10^8}$	$\cdot 4300\ 8442 \times \frac{1}{10^8}$	$\cdot 3239\ 5969 \times \frac{1}{10^8}$	$\cdot 2460\ 453$	
$\cdot 30$	$\cdot 0000\ 001$					
$\cdot 31$	$\cdot 0000\ 001$					
$\cdot 32$	$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 33$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 34$	$\cdot 0000\ 008$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 35$	$\cdot 0000\ 016$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 36$	$\cdot 0000\ 029$	$\cdot 0000\ 013$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 37$	$\cdot 0000\ 051$	$\cdot 0000\ 025^-$	$\cdot 0000\ 012$	$\cdot 0000\ 006$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 38$	$\cdot 0000\ 091$	$\cdot 0000\ 045^-$	$\cdot 0000\ 022$	$\cdot 0000\ 011$	$\cdot 0000\ 005^+$	$\cdot 0000\ 003$
$\cdot 39$	$\cdot 0000\ 157$	$\cdot 0000\ 080$	$\cdot 0000\ 040$	$\cdot 0000\ 020$	$\cdot 0000\ 010$	$\cdot 0000\ 005$
$\cdot 40$	$\cdot 0000\ 266$	$\cdot 0000\ 139$	$\cdot 0000\ 072$	$\cdot 0000\ 037$	$\cdot 0000\ 019$	$\cdot 0000\ 010$
$\cdot 41$	$\cdot 0000\ 442$	$\cdot 0000\ 236$	$\cdot 0000\ 125^+$	$\cdot 0000\ 066$	$\cdot 0000\ 034$	$\cdot 0000\ 018$
$\cdot 42$	$\cdot 0000\ 723$	$\cdot 0000\ 396$	$\cdot 0000\ 215^-$	$\cdot 0000\ 116$	$\cdot 0000\ 062$	$\cdot 0000\ 033$
$\cdot 43$	$\cdot 0001\ 163$	$\cdot 0000\ 651$	$\cdot 0000\ 362$	$\cdot 0000\ 199$	$\cdot 0000\ 109$	$\cdot 0000\ 059$
$\cdot 44$	$\cdot 0001\ 841$	$\cdot 0001\ 054$	$\cdot 0000\ 599$	$\cdot 0000\ 338$	$\cdot 0000\ 189$	$\cdot 0000\ 105$
$\cdot 45$	$\cdot 0002\ 868$	$\cdot 0001\ 679$	$\cdot 0000\ 975^-$	$\cdot 0000\ 562$	$\cdot 0000\ 322$	$\cdot 0000\ 183$
$\cdot 46$	$\cdot 0004\ 401$	$\cdot 0002\ 632$	$\cdot 0001\ 562$	$\cdot 0000\ 920$	$\cdot 0000\ 538$	$\cdot 0000\ 313$
$\cdot 47$	$\cdot 0006\ 656$	$\cdot 0004\ 064$	$\cdot 0002\ 463$	$\cdot 0001\ 481$	$\cdot 0000\ 885^-$	$\cdot 0000\ 525$
$\cdot 48$	$\cdot 0009\ 923$	$\cdot 0006\ 185^-$	$\cdot 0003\ 825^+$	$\cdot 0002\ 349$	$\cdot 0001\ 432$	$\cdot 0000\ 868$
$\cdot 49$	$\cdot 0014\ 593$	$\cdot 0009\ 279$	$\cdot 0005\ 855^+$	$\cdot 0003\ 668$	$\cdot 0002\ 283$	$\cdot 0001\ 411$
$\cdot 50$	$\cdot 0021\ 174$	$\cdot 0013\ 729$	$\cdot 0008\ 835^-$	$\cdot 0005\ 645^-$	$\cdot 0003\ 582$	$\cdot 0002\ 259$
$\cdot 51$	$\cdot 0030\ 325^-$	$\cdot 0020\ 042$	$\cdot 0013\ 147$	$\cdot 0008\ 563$	$\cdot 0005\ 540$	$\cdot 0003\ 562$
$\cdot 52$	$\cdot 0042\ 882$	$\cdot 0028\ 876$	$\cdot 0019\ 301$	$\cdot 0012\ 810$	$\cdot 0008\ 445^+$	$\cdot 0005\ 533$
$\cdot 53$	$\cdot 0059\ 889$	$\cdot 0041\ 073$	$\cdot 0027\ 962$	$\cdot 0018\ 903$	$\cdot 0012\ 694$	$\cdot 0008\ 472$
$\cdot 54$	$\cdot 0082\ 630$	$\cdot 0057\ 693$	$\cdot 0039\ 987$	$\cdot 0027\ 524$	$\cdot 0018\ 821$	$\cdot 0012\ 790$
$\cdot 55$	$\cdot 0112\ 657$	$\cdot 0080\ 046$	$\cdot 0056\ 463$	$\cdot 0039\ 555^+$	$\cdot 0027\ 530$	$\cdot 0019\ 043$
$\cdot 56$	$\cdot 0151\ 810$	$\cdot 0109\ 727$	$\cdot 0078\ 742$	$\cdot 0056\ 122$	$\cdot 0039\ 743$	$\cdot 0027\ 971$
$\cdot 57$	$\cdot 0202\ 234$	$\cdot 0148\ 641$	$\cdot 0108\ 475^+$	$\cdot 0078\ 631$	$\cdot 0056\ 634$	$\cdot 0040\ 543$
$\cdot 58$	$\cdot 0266\ 380$	$\cdot 0199\ 018$	$\cdot 0147\ 649$	$\cdot 0108\ 810$	$\cdot 0079\ 681$	$\cdot 0057\ 999$
$\cdot 59$	$\cdot 0346\ 986$	$\cdot 0263\ 423$	$\cdot 0198\ 600$	$\cdot 0148\ 743$	$\cdot 0110\ 707$	$\cdot 0081\ 907$
$\cdot 60$	$\cdot 0447\ 046$	$\cdot 0344\ 736$	$\cdot 0264\ 024$	$\cdot 0200\ 897$	$\cdot 0151\ 918$	$\cdot 0114\ 205$
$\cdot 61$	$\cdot 0569\ 743$	$\cdot 0446\ 118$	$\cdot 0346\ 967$	$\cdot 0268\ 124$	$\cdot 0205\ 933$	$\cdot 0157\ 247$
$\cdot 62$	$\cdot 0718\ 365^+$	$\cdot 0570\ 949$	$\cdot 0450\ 778$	$\cdot 0353\ 654$	$\cdot 0275\ 788$	$\cdot 0213\ 832$
$\cdot 63$	$\cdot 0896\ 182$	$\cdot 0722\ 727$	$\cdot 0579\ 049$	$\cdot 0461\ 053$	$\cdot 0364\ 927$	$\cdot 0287\ 209$
$\cdot 64$	$\cdot 1106\ 299$	$\cdot 0904\ 941$	$\cdot 0735\ 502$	$\cdot 0594\ 142$	$\cdot 0477\ 154$	$\cdot 0381\ 068$
$\cdot 65$	$\cdot 1351\ 482$	$\cdot 1120\ 908$	$\cdot 0923\ 853$	$\cdot 0756\ 884$	$\cdot 0616\ 544$	$\cdot 0499\ 477$
$\cdot 66$	$\cdot 1633\ 957$	$\cdot 1373\ 577$	$\cdot 1147\ 625^-$	$\cdot 0953\ 225^+$	$\cdot 0787\ 315^+$	$\cdot 0646\ 790$
$\cdot 67$	$\cdot 1955\ 206$	$\cdot 1665\ 309$	$\cdot 1409\ 932$	$\cdot 1186\ 887$	$\cdot 0993\ 646$	$\cdot 0827\ 490$
$\cdot 68$	$\cdot 2315\ 752$	$\cdot 1997\ 646$	$\cdot 1713\ 235^+$	$\cdot 1461\ 126$	$\cdot 1239\ 443$	$\cdot 1045\ 988$
$\cdot 69$	$\cdot 2714\ 965^+$	$\cdot 2371\ 069$	$\cdot 2059\ 078$	$\cdot 1778\ 453$	$\cdot 1528\ 069$	$\cdot 1306\ 353$
$\cdot 70$	$\cdot 3150\ 896$	$\cdot 2784\ 782$	$\cdot 2447\ 821$	$\cdot 2140\ 345^-$	$\cdot 1862\ 025^+$	$\cdot 1612\ 002$
$\cdot 71$	$\cdot 3620\ 159$	$\cdot 3236\ 528$	$\cdot 2878\ 401$	$\cdot 2546\ 942$	$\cdot 2242\ 629$	$\cdot 1965\ 348$
$\cdot 72$	$\cdot 4117\ 886$	$\cdot 3722\ 463$	$\cdot 3348\ 129$	$\cdot 2996\ 791$	$\cdot 2669\ 682$	$\cdot 2367\ 434$
$\cdot 73$	$\cdot 4637\ 763$	$\cdot 4237\ 113$	$\cdot 3852\ 562$	$\cdot 3486\ 621$	$\cdot 3141\ 186$	$\cdot 2817\ 570$
$\cdot 74$	$\cdot 5172\ 163$	$\cdot 4773\ 426$	$\cdot 4385\ 469$	$\cdot 4011\ 229$	$\cdot 3653\ 120$	$\cdot 3313\ 036$
$\cdot 75$	$\cdot 5712\ 382$	$\cdot 5322\ 943$	$\cdot 4938\ 914$	$\cdot 4563\ 457$	$\cdot 4199\ 328$	$\cdot 3848\ 854$
$\cdot 76$	$\cdot 6248\ 073$	$\cdot 5876\ 087$	$\cdot 5502\ 177$	$\cdot 5131\ 128$	$\cdot 4553\ 112$	

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .37$ to $.99$ $q = 9.5$

	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p = 36$
$B(p, q) = .1883\ 3100 \times \frac{1}{10^9}$		$.1452\ 1908 \times \frac{1}{10^9}$	$.1127\ 5835 \times \frac{1}{10^9}$	$.8813\ 2961 \times \frac{1}{10^{10}}$	$.6931\ 8$
x					
.37	.0000 001				
.38	.0000 001	.0000 001			
.39	.0000 002	.0000 001	.0000 001		
.40	.0000 005-	.0000 002	.0000 001		
.41	.0000 009	.0000 005-		.0000 001	
.42	.0000 017	.0000 009	.0000 002	.0000 001	.0000 001
.43	.0000 032	.0000 017	.0000 005-	.0000 002	.0000 001
.44	.0000 058	.0000 032	.0000 009	.0000 005-	.0000 001
.45	.0000 103	.0000 058	.0000 017	.0000 009	.0000 001
.46	.0000 181	.0000 104	.0000 032	.0000 018	.0000 011
.47	.0000 310	.0000 182	.0000 059	.0000 034	.0000 011
.48	.0000 523	.0000 313	.0000 106	.0000 061	.0000 031
.49	.0000 867	.0000 530	.0000 186	.0000 110	.0000 061
.50	.0001 416	.0000 882	.0000 322	.0000 195-	.0000 111
.51	.0002 276	.0001 446	.0000 547	.0000 337	.0000 201
.52	.0003 603	.0002 333	.0000 914	.0000 574	.0000 351
.53	.0005 620	.0003 707	.0001 502	.0000 963	.0000 611
.54	.0008 640	.0005 804	.0002 432	.0001 587	.0001 031
.55	.0013 095-	.0008 954	.0003 878	.0002 578	.0001 701
.56	.0019 572	.0013 619	.0006 090	.0004 121	.0002 771
.57	.0028 856	.0020 425+	.0009 426	.0006 492	.0004 441
.58	.0041 975+	.0030 213	.0014 382	.0010 076	.0007 021
.59	.0060 255+	.0044 088	.0021 634	.0015 414	.0010 931
.60	.0085 372	.0063 478	.0032 092	.0023 245+	.0016 751
.61	.0119 407	.0090 192	.0046 957	.0034 567	.0025 321
.62	.0164 887	.0126 480	.0067 781	.0050 693	.0037 731
.63	.0224 822	.0175 078	.0096 534	.0073 327	.0055 441
.64	.0302 711	.0239 242	.0135 667	.0104 631	.0080 321
.65	.0402 519	.0322 756	.0188 159	.0147 293	.0114 781
.66	.0528 612	.0429 897	.0257 556	.0204 580	.0161 781
.67	.0685 642	.0565 359	.0347 963	.0280 368	.0224 921
.68	.0878 369	.0734 111	.0464 011	.0379 133	.0308 452
.69	.1111 422	.0941 192	.0610 749	.0505 892	.0417 271
.70	.1388 997	.1191 429	.0793 479	.0666 077	.0556 820
.71	.1714 499	.1489 087	.1017 509	.0865 329	.0732 932
.72	.2090 145+	.1837 466	.1287 822	.1109 199	.0951 577
.73	.2516 556	.2238 447	.1608 676	.1402 766	.1218 505
.74	.2992 370	.2692 046	.1983 134	.1750 161	.1538 788
.75	.3513 925+	.3196 005-	.2412 503	.2154 040	.1916 274
.76	.4075 056	.3745 469	.2896 148	.2615 032	.2352 992
.77	.4667 053	.4332 823	.3430 464	.3131 209	.2848 541
.78	.5278 831	.4947 722	.4009 176	.3697 667	.3399 552
.79	.5897 333	.5577 386	.4622 935-	.4306 266	.3999 279
.80	.6508 167	.6207 149	.5259 523	.4945 633	.4637 439
			.5904 306	.5601 464	.5300 351

TABLES OF THE INCOMPLETE β -FUNCTION

43 to 99

$q = 9.5$

$p = 38$ to

	$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$\gamma(q) = .4364 \ 0154 \times 10^{10}$		$.3491 \ 2123 \times 10^{10}$	$.2807 \ 3666 \times 10^{10}$	$.2268 \ 5791 \times 10^{10}$	$.1841 \ 8167 \times 10^{10}$	$.1502 \ 0641 \times 10^{10}$
43	.0000 001	.0000 001				
44	.0000 001	.0000 002	.0000 001			
45	.0000 003	.0000 003	.0000 002	.0000 001	.0000 001	
46	.0000 006	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001
47	.0000 012	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
48	.0000 022	.0000 025	.0000 015	.0000 009	.0000 005	.0000 003
49	.0000 044	.0000 046	.0000 028	.0000 017	.0000 010	.0000 006
50	.0000 077					
51	.0000 139	.0000 086	.0000 053	.0000 032	.0000 020	.0000 012
52	.0000 246	.0000 155	.0000 097	.0000 060	.0000 038	.0000 023
53	.0000 429	.0000 275	.0000 175	.0000 112	.0000 071	.0000 045
54	.0000 736	.0000 480	.0000 312	.0000 202	.0000 130	.0000 084
55	.0001 242	.0000 825	.0000 546	.0000 360	.0000 236	.0000 155
56	.0002 062	.0001 394	.0000 939	.0000 630	.0000 421	.0000 281
57	.0003 370	.0002 319	.0001 589	.0001 855	.0000 738	.0000 500
58	.0005 423	.0003 795	.0002 646	.0001 837	.0001 271	.0000 876
59	.0008 594	.0006 116	.0004 335	.0003 001	.0002 154	.0001 510
60	.0013 418	.0009 706	.0006 993	.0005 019	.0003 500	.0002 558
61	.0020 641	.0015 171	.0011 107	.0008 101	.0005 888	.0004 264
62	.0031 288	.0023 360	.0017 374	.0012 873	.0009 505	.0006 993
63	.0046 743	.0035 441	.0026 768	.0020 143	.0015 104	.0011 287
64	.0068 832	.0052 981	.0040 626	.0031 038	.0023 630	.0017 929
65	.0099 913	.0078 051	.0060 744	.0047 104	.0036 400	.0028 034
66	.0142 971	.0113 319	.0089 484	.0070 409	.0055 210	.0043 149
67	.0201 688	.0162 146	.0129 879	.0103 666	.0082 462	.0065 381
68	.0280 493	.0228 661	.0185 734	.0150 341	.0121 283	.0097 526
69	.0384 563	.0317 801	.0261 695	.0214 755	.0175 652	.0143 210
70	.0519 758	.0435 287	.0363 270	.0302 145	.0250 488	.0207 009
71	.0692 460	.0587 524	.0496 780	.0418 661	.0351 698	.0294 532
72	.0909 314	.0781 386	.0669 203	.0571 267	.0486 134	.0412 434
73	.1176 830	.1023 878	.0887 888	.0767 520	.0661 435	.0568 320
74	.1500 868	.1321 649	.1160 123	.1015 194	.0885 712	.0770 593
75	.1886 002	.1680 371	.1492 535	.1321 722	.1167 053	.1027 574
76	.2334 809	.2103 999	.1890 353	.1693 477	.1512 832	.1347 757
77	.2847 127	.2593 968	.2356 551	.2134 893	.1928 832	.1738 053
78	.3419 385	.3148 403	.2890 970	.2647 593	.2418 228	.2203 201
79	.4044 099	.3761 453	.3489 497	.3228 997	.2980 537	.2744 520
80	.4709 648	.4422 877	.4143 460	.3872 425	.3610 645	.3358 837
81	.5400 457	.5118 021	.4839 387	.4565 733	.4298 120	.4037 485
82	.6097 654	.5828 286	.5559 264	.5291 780	.5026 988	.4765 997
83	.6780 241	.6532 177	.6281 411	.6029 046	.5776 158	.5523 781
84	.7426 728	.7206 900	.6981 999	.6752 938	.6520 636	.6286 611
85	.8017 091	.7830 403	.7637 133	.7437 944	.7233 533	.7024 619
86	.8521 921	.8383 620	.8235 280	.8080 762	.7928 888	
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .48$ to $.99$ $q = 9.5$

	$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$
$B(p, q) = .1230\ 2620 \times \frac{x}{1010}$	$.1011\ 8043 \times \frac{x}{1010}$	$.8354\ 3471 \times \frac{x}{1011}$	$.6924\ 3237 \times \frac{x}{1011}$	$.5760\ 0569 \times \frac{x}{1010}$	
x					
.48	.0000 001				
.49	.0000 002	.0000 001	.0000 001		
.50	.0000 004	.0000 002	.0000 001	.0000 001	
.51	.0000 007	.0000 004	.0000 003		
.52	.0000 014	.0000 009	.0000 005+	.0000 002	.0000 001
.53	.0000 028	.0000 018	.0000 011	.0000 003	.0000 002
.54	.0000 054	.0000 034	.0000 022	.0000 007	.0000 004
.55	.0000 101	.0000 066	.0000 043	.0000 014	.0000 009
.56	.0000 186	.0000 123	.0000 081	.0000 027	.0000 018
.57	.0000 338	.0000 228	.0000 153	.0000 053	.0000 035+
.58	.0000 602	.0000 412	.0000 282	.0000 102	.0000 068
.59	.0001 055-	.0000 735-	.0000 510	.0000 192	.0000 130
.60	.0001 817	.0001 287	.0000 908	.0000 353	.0000 244
.61	.0003 078	.0002 215-	.0001 589	.0000 639	.0000 448
.62	.0005 129	.0003 749	.0002 732	.0001 136	.0000 810
.63	.0008 407	.0006 242	.0004 620	.0001 985+	.0001 438
.64	.0013 559	.0010 222	.0007 683	.0003 410	.0002 510
.65	.0021 521	.0016 470	.0012 566	.0005 758	.0004 303
.66	.0033 615-	.0026 107	.0020 215+	.0009 560	.0007 253
.67	.0051 674	.0040 716	.0031 987	.0015 608	.0012 018
.68	.0078 177	.0062 478	.0049 787	.0025 059	.0019 577
.69	.0116 401	.0094 328	.0076 222	.0039 562	.0031 351
.70	.0170 558	.0140 113	.0114 776	.0061 420	.0049 359
.71	.0245 921	.0204 740	.0169 979	.0093 763	.0076 394
.72	.0348 880	.0294 282	.0247 545+	.0140 738	.0116 222
.73	.0486 909	.0415 999	.0354 456	.0207 677	.0173 781
.74	.0668 397	.0578 241	.0498 925-	.0301 228	.0255 345+
.75	.0902 287	.0790 169	.0690 197	.0429 384	.0368 618
.76	.1197 500+	.1061 244	.0938 130	.0601 363	.0522 689
.77	.1562 116	.1400 473	.1252 498	.0827 273	.0727 785+
.78	.2002 326	.1815 375-	.1642 009	.1117 503	.0994 758
.79	.2521 228	.2310 741	.2113 047	.1481 706	.1334 230
.80	.3117 570	.2887 270	.2668 229	.1920 910	.1755 394
.81	.3784 637	.3540 266	.3304 937	.2460 617	.2264 489
.82	.4509 502	.4258 632	.4014 062	.3079 098	.2863 085-
.83	.5272 901	.5024 445-	.4779 273	.3776 457	.3546 385-
.84	.6049 967	.5813 387	.5577 123	.5438 179	.5301 881
.85	.6811 941	.6596 241	.6378 265-	.6151 988	.5108 755-
.86	.7528 846	.7341 476	.7149 902	.6954 704	.5938 414
.87	.8172 870	.8018 750+	.7859 339	.7695 024	.6756 475-
.88	.8721 958	.8602 831	.8478 198	.8348 255-	.7526 217
.89	.9162 912	.9077 220	.8986 548	.8890 939	.8213 224
.90	.9493 257	.9436 604	.9375 986	.9311 348	.8790 457
.91	.9721 250+	.9687 391	.9650 550		.9242 653

TABLES OF THE INCOMPLETE β -FUNCTION

7 to 70

$q = 10$

$p = 10$

$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$q) = .1082\ 5088 \times \frac{1}{10^6}$	$.7606\ 8365 \times \frac{1}{10^6}$	$.5412\ 5441 \times \frac{1}{10^6}$	$.2835\ 1422 \times \frac{1}{10^6}$	$.1546\ 4412 \times \frac{1}{10^6}$	$.8740\ 7545 \times \frac{1}{10^6}$
.0000 001	.0000 001				
.0000 005 ⁺	.0000 002	.0000 001			
.0000 015 ⁻	.0000 006	.0000 002			
.0000 039	.0000 017	.0000 007	.0000 001		
.0000 093	.0000 042	.0000 018	.0000 004	.0000 001	
.0000 203	.0000 095 ⁻	.0000 044	.0000 009	.0000 002	
.0000 413	.0000 201	.0000 097	.0000 022	.0000 005 ⁻	.0000 001
.0000 790	.0000 398	.0000 199	.0000 048	.0000 011	.0000 003
.0001 435 ⁺	.0000 748	.0000 386	.0000 100	.0000 025 ⁺	.0000 006
.0002 491	.0001 340	.0000 714	.0000 198	.0000 053	.0000 014
.0004 154	.0002 303	.0001 265 ⁻	.0000 371	.0000 106	.0000 029
.0006 686	.0003 811	.0002 152	.0000 669	.0000 201	.0000 059
.0010 423	.0006 101	.0003 538	.0001 159	.0000 368	.0000 114
.0015 791	.0009 477	.0005 634	.0001 941	.0000 648	.0000 210
.0023 310	.0014 324	.0008 721	.0003 151	.0001 103	.0000 376
.0033 605 ⁺	.0021 122	.0013 153	.0004 972	.0001 823	.0000 650 ⁻
.0047 410	.0030 445 ⁻	.0019 372	.0007 647	.0002 927	.0001 090
.0065 569	.0042 977	.0027 914	.0011 483	.0004 582	.0001 779
.0089 033	.0059 512	.0039 421	.0016 871	.0007 005 ⁻	.0002 831
.0118 854	.0080 950 ⁻	.0054 642	.0024 287	.0010 475 ⁺	.0004 398
.0156 176	.0108 299	.0074 436	.0034 309	.0015 349	.0006 686
.0202 213	.0142 665 ⁺	.0099 772	.0047 620	.0022 065 ⁺	.0009 957
.0258 233	.0185 236	.0131 721	.0065 015 ⁻	.0031 161	.0014 547
.0325 534	.0237 267	.0171 448	.0087 402	.0043 277	.0020 875 ⁺
.0405 410	.0300 056	.0220 195 ⁻	.0115 801	.0059 167	.0029 456
.0499 125 ⁺	.0374 921	.0279 259	.0151 338	.0079 701	.0040 908
.0607 877	.0463 164	.0349 974	.0195 232	.0105 869	.0055 963
.0732 761	.0566 042	.0433 674	.0248 784	.0138 774	.0075 477
.0874 736	.0684 732	.0531 666	.0313 349	.0179 630	.0100 427
.1034 592	.0820 289	.0645 194	.0390 316	.0229 742	.0131 916
.1212 913	.0973 619	.0775 400	.0481 073	.0290 496	.0171 166
.1410 055 ⁺	.1145 436	.0923 288	.0586 976	.0363 329	.0219 506
.1626 116	.1336 233	.1089 687	.0709 309	.0449 701	.0278 360
.1860 920	.1546 255 ⁻	.1275 212	.0849 243	.0551 065 ⁻	.0349 221
.2114 003	.1775 471	.1480 239	.1007 797	.0668 820	.0433 622
.2384 607	.2023 562	.1704 869	.1185 796	.0804 278	.0533 107
.2671 682	.2289 903	.1948 909	.1383 832	.0958 612	.0649 183
.2973 894	.2573 565 ⁺	.2211 858	.1602 229	.1132 814	.0783 281
.3289 641	.2873 316	.2492 804	.1841 009	.1327 651	.0936 708
.3617 076	.3187 634	.2790 878	.2099 875 ⁺	.1543 618	.1110 593
.3954 137	.3514 726	.3104 359	.2378 184	.1780 905 ⁺	.1305 839
.4298 582	.3852 557	.3431 591	.2674 945 ⁻	.2039 362	.1523 073
.4648 028	.4198 879	.3776 561	.2988 817	.2318 471	.1762 600
.5000 000 [*]	.4551 280	.4119 015 ⁻	.3318 119	.2617 336	.2024 264

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.96$ $q = 10$

	$p = 10$	$p = 10.5$	$p = 11$	$p = 12$	$p = 12.5$
$B(p, q) = .1082\ 5088 \times \frac{1}{10^8}$		$.7606\ 8365 \times \frac{1}{10^8}$	$.5412\ 5441 \times \frac{1}{10^8}$	$.2835\ 1422 \times \frac{1}{10^8}$	$.1546\ 44$
.71	.9741 767	.9682 883	.9615 255 ⁻	.9451 939	.9249 02
.72	.9797 787	.9750 286	.9695 346	.9561 242	.9392 27
.73	.9843 824	.9806 062	.9762 084	.9653 593	.9514 99
.74	.9881 146	.9851 590	.9816 933	.9730 538	.9618 65
.75	.9910 967	.9888 215 ⁻	.9861 356	.9793 704	.9704 91
.76	.9934 431	.9917 224	.9896 777	.9844 745 ⁻	.9775 54
.77	.9952 590	.9939 823	.9924 551	.9885 297	.9832 40
.78	.9966 395 ⁻	.9957 115 ⁻	.9945 942	.9916 937	.9877 34
.79	.9976 690	.9970 093	.9962 101	.9941 145 ⁺	.9912 17
.80	.9984 209	.9979 632	.9974 052	.9959 278	.9938 59
.81	.9989 577	.9986 485 ⁻	.9982 691	.9972 550 ⁻	.9958 17
.82	.9993 314	.9991 285 ⁺	.9988 781	.9982 022	.9972 32
.83	.9995 846	.9994 557	.9992 956	.9988 596	.9982 26
.84	.9997 509	.9996 719	.9995 733	.9993 019	.9989 03
.85	.9998 565 ⁻	.9998 100	.9997 516	.9995 895 ⁺	.9993 48
.86	.9999 210	.9998 949	.9998 619	.9997 694	.9996 30
.87	.9999 587	.9999 448	.9999 271	.9998 770	.9998 00
.88	.9999 797	.9999 727	.9999 638	.9999 383	.9998 99
.89	.9999 907	.9999 874	.9999 832	.9999 711	.9999 52
.90	.9999 961	.9999 947	.9999 928	.9999 876	.9999 79
.91	.9999 985 ⁺	.9999 980	.9999 972	.9999 952	.9999 91
.92	.9999 995 ⁻	.9999 993	.9999 991	.9999 983	.9999 97
.93	.9999 999	.9999 998	.9999 997	.9999 995 ⁺	.9999 99
.94	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 99
.95			1.0000 000	1.0000 000	1.0000 00
.96					

TABLES OF THE INCOMPLETE β -FUNCTION

$= .14$ to $.70$

$q = 10$

$p =$

	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$\beta(p, q) =$	$.5098\ 7734 \times \frac{1}{10^7}$	$.3059\ 2641 \times \frac{1}{10^7}$	$.1882\ 6240 \times \frac{1}{10^7}$	$.1185\ 3559 \times \frac{1}{10^7}$	$.7620\ 1449 \times \frac{1}{10^8}$	$.4992\ 50$
x						
.14	.0000 001					
.15	.0000 001					
.16	.0000 004	.0000 001				
.17	.0000 008	.0000 002	.0000 001			
.18	.0000 017	.0000 005	.0000 001			
.19	.0000 034	.0000 010	.0000 003	.0000 001		
.20	.0000 067	.0000 021	.0000 006	.0000 002	.0000 001	
.21	.0000 125	.0000 041	.0000 013	.0000 004	.0000 001	
.22	.0000 226	.0000 077	.0000 026	.0000 008	.0000 003	.0000 00
.23	.0000 396	.0000 141	.0000 049	.0000 017	.0000 006	.0000 00
.24	.0000 674	.0000 250	.0000 091	.0000 032	.0000 011	.0000 00
.25	.0001 117	.0000 431	.0000 163	.0000 061	.0000 022	.0000 00
.26	.0001 803	.0000 723	.0000 284	.0000 110	.0000 042	.0000 00
.27	.0002 843	.0001 183	.0000 482	.0000 193	.0000 076	.0000 00
.28	.0004 387	.0001 891	.0000 799	.0000 332	.0000 136	.0000 00
.29	.0006 631	.0002 959	.0001 294	.0000 556	.0000 235 ⁺	.0000 00
.30	.0009 835	.0004 535 ⁺	.0002 051	.0000 911	.0000 398	.0000 1
.31	.0014 325	.0006 820	.0003 184	.0001 461	.0000 659	.0000 2
.32	.0020 513	.0010 071	.0004 850 ⁺	.0002 295	.0001 068	.0000 4
.33	.0028 907	.0014 621	.0007 255 ⁺	.0003 538	.0001 697	.0000 8
.34	.0040 120	.0020 886	.0010 668	.0005 355 ⁺	.0002 645 ⁺	.0001 2
.35	.0054 885 ⁺	.0029 382	.0015 435	.0007 969	.0004 049	.0002 0
.36	.0074 059	.0040 733	.0021 987	.0011 666	.0006 092	.0003 1
.37	.0098 630	.0055 688	.0030 863	.0016 815	.0009 018	.0004 7
.38	.0129 720	.0075 130	.0042 717	.0023 879	.0013 142	.0007 1
.39	.0168 580	.0100 076	.0058 332	.0033 433	.0018 867	.0010 4
.40	.0216 581	.0131 691	.0078 635	.0046 177	.0026 702	.0015 2
.41	.0275 200	.0171 275	.0104 697	.0062 950	.0037 275	.0021 7
.42	.0345 998	.0220 262	.0137 747	.0084 743	.0051 351	.0030 6
.43	.0430 593	.0280 203	.0179 160	.0112 709	.0069 848	.0042 6
.44	.0530 619	.0352 744	.0230 456	.0148 163	.0093 849	.0058 6
.45	.0647 690	.0439 597	.0293 282	.0192 582	.0124 610	.0079 5
.46	.0783 350 ⁺	.0542 500	.0369 388	.0247 599	.0163 565	.0106 5
.47	.0939 020	.0663 173	.0460 597	.0314 981	.0212 321	.0141 2
.48	.1115 943	.0803 266	.0568 759	.0396 603	.0272 651	.0184 9
.49	.1315 124	.0964 303	.0695 705 ⁺	.0494 415 ⁺	.0346 467	.0239 6
.50	.1537 281	.1147 615	.0843 188	.0610 391	.0435 793	.0307 1
.51	.1782 786	.1354 280	.1012 815	.0746 472	.0542 719	.0389 5
.52	.2051 618	.1585 060	.1205 982	.0904 503	.0669 349	.0489 1
.53	.2343 327	.1840 337	.1423 798	.1086 157	.0817 732	.0608 0
.54	.2657 005 ⁺	.2120 063	.1667 018	.1292 856	.0989 784	.0748 6
.55	.2991 267	.2423 712	.1935 968	.1525 690	.1187 211	.0912 8
.56	.3344 253	.2750 248	.2230 493	.1785 339	.1411 409	.1102 8
.57	.3713 630	.3098 107	.2540 800	.2071 001	.1663 380	.1320 2

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.97$ $q = 10$

	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
$B(p, q) = .5098\ 7734 \times \frac{1}{10^7}$		$.3059\ 2641 \times \frac{1}{10^7}$	$.1882\ 6240 \times \frac{1}{10^7}$	$.1185\ 3559 \times \frac{1}{10^7}$	$.7620\ 1449$
x					
.71	.8720 810	.8397 739	.8039 332	.7650 144	.7235 659
.72	.8942 851	.8662 301	.8346 682	.7999 129	.7623 773
.73	.9138 430	.8898 589	.8625 021	.8319 589	.7985 142
.74	.9308 213	.9106 538	.8873 351	.8609 438	.8316 495
.75	.9453 351	.9286 717	.9091 444	.8867 454	.8615 465
.76	.9575 410	.9440 277	.9279 808	.9093 285 ⁺	.8880 450
.77	.9676 286	.9568 867	.9439 628	.9287 430	.9111 642
.78	.9758 115 ⁺	.9674 538	.9572 678	.9451 165 ⁻	.9308 995
.79	.9823 174	.9759 635 ⁻	.9681 203	.9586 440	.9474 145
.80	.9873 789	.9826 681	.9767 797	.9695 749	.9609 293
.81	.9912 250 ⁻	.9878 267	.9835 258	.9781 978	.9717 242
.82	.9940 731	.9916 942	.9886 463	.9848 238	.9801 221
.83	.9961 234	.9945 123	.9924 230	.9897 709	.9864 689
.84	.9975 537	.9965 022	.9951 220	.9933 489	.9911 148
.85	.9985 174	.9978 587	.9969 840	.9958 468	.9943 970
.86	.9991 416	.9987 478	.9982 188	.9975 229	.9966 252
.87	.9995 283	.9993 051	.9990 017	.9985 981	.9980 712
.88	.9997 561	.9996 371	.9994 735 ⁻	.9992 533	.9989 626
.89	.9998 825 ⁻	.9998 234	.9997 413	.9996 295 ⁺	.9994 803
.90	.9999 479	.9999 210	.9998 832	.9998 311	.9997 607
.91	.9999 792	.9999 681	.9999 523	.9999 304	.9999 005
.92	.9999 926	.9999 886	.9999 829	.9999 747	.9999 635
.93	.9999 978	.9999 965 ⁺	.9999 947	.9999 922	.9999 886
.94	.9999 995 ⁻	.9999 991	.9999 987	.9999 980	.9999 971
.95	.9999 999	.9999 998	.9999 998	.9999 996	.9999 994
.96	1.0000 000	1.0000 000	1.0000 000	1.0000 000	.9999 999
.97					1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION $\alpha = .23$ to $.80$ $q = 10$ $p =$

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$(p, q) =$	$.3328\ 3392 \times \frac{1}{10^8}$	$.2254\ 6814 \times \frac{1}{10^8}$	$.1550\ 0934 \times \frac{1}{10^8}$	$.1080\ 3682 \times \frac{1}{10^8}$	$.7626\ 1281 \times \frac{1}{10^8}$	$.5447\ 23$
x						
.23	.0000 001					
.24	.0000 001					
.25	.0000 003	.0000 001				
.26	.0000 006	.0000 002	.0000 001			
.27	.0000 011	.0000 004	.0000 002	.0000 001		
.28	.0000 022	.0000 008	.0000 003	.0000 001		
.29	.0000 040	.0000 016	.0000 007	.0000 003	.0000 001	
.30	.0000 073	.0000 031	.0000 013	.0000 005 ⁺	.0000 002	.0000 00
.31	.0000 129	.0000 056	.0000 024	.0000 010	.0000 004	.0000 00
.32	.0000 222	.0000 099	.0000 044	.0000 019	.0000 008	.0000 00
.33	.0000 374	.0000 172	.0000 078	.0000 035 ⁺	.0000 016	.0000 00
.34	.0000 618	.0000 293	.0000 137	.0000 064	.0000 029	.0000 01
.35	.0001 001	.0000 488	.0000 236	.0000 112	.0000 053	.0000 02
.36	.0001 592	.0000 798	.0000 396	.0000 194	.0000 094	.0000 04
.37	.0002 486	.0001 280	.0000 652	.0000 328	.0000 164	.0000 08
.38	.0003 816	.0002 017	.0001 054	.0000 545 ⁻	.0000 279	.0000 14
.39	.0005 761	.0003 124	.0001 674	.0000 888	.0000 466	.0000 24
.40	.0008 564	.0004 759	.0002 615 ⁻	.0001 421	.0000 765 ⁻	.0000 40
.41	.0012 539	.0007 138	.0004 017	.0002 237	.0001 233	.0000 67
.42	.0018 096	.0010 544	.0006 075 ⁻	.0003 403	.0001 955 ⁻	.0001 09
.43	.0025 754	.0015 351	.0009 048	.0005 277	.0003 048	.0001 74
.44	.0036 162	.0022 039	.0013 282	.0007 922	.0004 679	.0002 73
.45	.0050 121	.0031 214	.0019 224	.0011 718	.0007 073	.0004 23
.46	.0068 601	.0043 632	.0027 448	.0017 089	.0010 538	.0006 43
.47	.0092 758	.0060 222	.0038 674	.0024 583	.0015 477	.0009 65
.48	.0123 946	.0082 100	.0053 797	.0034 895 ⁺	.0022 420	.0014 27
.49	.0163 727	.0110 593	.0073 906	.0048 896	.0032 045 ⁻	.0020 81
.50	.0213 870	.0147 247	.0100 308	.0067 655 ⁻	.0045 206	.0029 94
.51	.0276 339	.0193 833	.0134 541	.0092 469	.0062 966	.0042 50
.52	.0353 275 ⁺	.0252 342	.0178 385 ⁺	.0124 879	.0086 622	.0059 56
.53	.0446 958	.0324 968	.0233 864	.0166 684	.0117 727	.0082 43
.54	.0559 759	.0414 079	.0303 229	.0219 948	.0158 111	.0112 60
.55	.0694 073	.0522 166	.0388 937	.0286 989	.0209 890	.0152 22
.56	.0852 243	.0651 783	.0493 601	.0370 357	.0275 460	.0203 18
.57	.1036 463	.0805 464	.0619 930	.0472 794	.0357 476	.0268 08
.58	.1248 673	.0985 625 ⁺	.0770 644	.0597 163	.0458 812	.0349 68
.59	.1490 444	.1194 449	.0948 370	.0746 371	.0582 500 ⁻	.0451 00
.60	.1762 865 ⁻	.1433 764	.1155 524	.0923 254	.0731 631	.0575 26
.61	.2066 423	.1704 908	.1394 170	.1130 448	.0909 251	.0725 74
.62	.2400 900	.2008 604	.1665 879	.1370 242	.1118 211	.0905 60
.63	.2765 286	.2344 829	.1971 577	.1644 414	.1361 009	.1118 18
.64	.3157 710	.2712 712	.2311 405 ⁺	.1954 068	.1639 611	.1365 90
.65	.3575 409	.3110 451	.2684 591	.2299 466	.1955 260	.1650 90
.66	.4014 733	.3535 259	.3089 348	.2679 886	.2308 299	.1974 77

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81 \text{ to } .98$ $q = 10$

	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$B(p, q) = .3328\ 3392 \times \frac{1}{10^8}$	$.2254\ 6814 \times \frac{1}{10^8}$	$.1550\ 0934 \times \frac{1}{10^8}$	$.1080\ 3682 \times \frac{1}{10^8}$	$.7626\ 128$	
$\cdot 81$	$\cdot 9549\ 209$	$\cdot 9444\ 188$	$\cdot 9324\ 322$	$\cdot 9189\ 237$	$\cdot 9038\ 787$
$\cdot 82$	$\cdot 9676\ 850^+$	$\cdot 9597\ 715^+$	$\cdot 9506\ 278$	$\cdot 9401\ 960$	$\cdot 9284\ 342$
$\cdot 83$	$\cdot 9775\ 693$	$\cdot 9718\ 059$	$\cdot 9650\ 652$	$\cdot 9572\ 813$	$\cdot 9483\ 979$
$\cdot 84$	$\cdot 9849\ 807$	$\cdot 9809\ 385^-$	$\cdot 9761\ 540$	$\cdot 9705\ 624$	$\cdot 9641\ 040$
$\cdot 85$	$\cdot 9903\ 424$	$\cdot 9876\ 243$	$\cdot 9843\ 688$	$\cdot 9805\ 187$	$\cdot 9760\ 190$
$\cdot 86$	$\cdot 9940\ 687$	$\cdot 9923\ 257$	$\cdot 9902\ 135^-$	$\cdot 9876\ 862$	$\cdot 9846\ 976$
$\cdot 87$	$\cdot 9965\ 437$	$\cdot 9954\ 848$	$\cdot 9941\ 865^+$	$\cdot 9926\ 151$	$\cdot 9907\ 353$
$\cdot 88$	$\cdot 9981\ 047$	$\cdot 9975\ 001$	$\cdot 9967\ 503$	$\cdot 9958\ 323$	$\cdot 9947\ 216$
$\cdot 89$	$\cdot 9990\ 320$	$\cdot 9987\ 109$	$\cdot 9983\ 082$	$\cdot 9978\ 095^+$	$\cdot 9971\ 993$
$\cdot 90$	$\cdot 9995\ 456$	$\cdot 9993\ 891$	$\cdot 9991\ 906$	$\cdot 9989\ 420$	$\cdot 9986\ 343$
$\cdot 91$	$\cdot 9998\ 074$	$\cdot 9997\ 386$	$\cdot 9996\ 503$	$\cdot 9995\ 385^+$	$\cdot 9993\ 987$
$\cdot 92$	$\cdot 9999\ 280$	$\cdot 9999\ 013$	$\cdot 9998\ 668$	$\cdot 9998\ 225^+$	$\cdot 9997\ 665$
$\cdot 93$	$\cdot 9999\ 770$	$\cdot 9999\ 682$	$\cdot 9999\ 567$	$\cdot 9999\ 418$	$\cdot 9999\ 227$
$\cdot 94$	$\cdot 9999\ 941$	$\cdot 9999\ 917$	$\cdot 9999\ 886$	$\cdot 9999\ 845^-$	$\cdot 9999\ 792$
$\cdot 95$	$\cdot 9999\ 988$	$\cdot 9999\ 984$	$\cdot 9999\ 977$	$\cdot 9999\ 969$	$\cdot 9999\ 958$
$\cdot 96$	$\cdot 9999\ 999$	$\cdot 9999\ 998$	$\cdot 9999\ 997$	$\cdot 9999\ 996$	$\cdot 9999\ 994$
$\cdot 97$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$
$\cdot 98$					

TABLES OF THE INCOMPLETE β -FUNCTION

4
= .31 to .98

$q = 10$

$p = 2$

	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$B(p, q) =$	.3934 1137 $\times\frac{1}{10^9}$	.2870 8397 $\times\frac{1}{10^9}$	.2115 3556 $\times\frac{1}{10^9}$	.1572 9567 $\times\frac{1}{10^9}$	.1179 7175 $\times\frac{1}{10^9}$	.8919 8151 $\times\frac{1}{10^9}$
π						
.31	.0000 001					
.32	.0000 001	.0000 001				
.33	.0000 003	.0000 001	.0000 001			
.34	.0000 006	.0000 003	.0000 001	.0000 001		
.35	.0000 011	.0000 005 ⁺	.0000 002	.0000 001		
.36	.0000 022	.0000 010	.0000 005 ⁻	.0000 002	.0000 001	
.37	.0000 040	.0000 019	.0000 009	.0000 004	.0000 002	.0000 001
.38	.0000 071	.0000 035 ⁺	.0000 017	.0000 009	.0000 004	.0000 002
.39	.0000 125 ⁻	.0000 064	.0000 032	.0000 016	.0000 008	.0000 004
.40	.0000 215 ⁺	.0000 113	.0000 059	.0000 030	.0000 016	.0000 008
.41	.0000 365 ⁻	.0000 196	.0000 104	.0000 055 ⁺	.0000 029	.0000 011
.42	.0000 606	.0000 333	.0000 182	.0000 098	.0000 053	.0000 028
.43	.0000 989	.0000 557	.0000 311	.0000 172	.0000 095 ⁻	.0000 051
.44	.0001 588	.0000 914	.0000 522	.0000 296	.0000 167	.0000 093
.45	.0002 509	.0001 476	.0000 862	.0000 499	.0000 287	.0000 162
.46	.0003 901	.0002 345 ⁻	.0001 398	.0000 828	.0000 487	.0000 281
.47	.0005 974	.0003 667	.0002 233	.0001 351	.0000 811	.0000 481
.48	.0009 015 ⁻	.0005 647	.0003 511	.0002 167	.0001 329	.0000 810
.49	.0013 408	.0008 569	.0005 435 ⁺	.0003 423	.0002 142	.0001 331
.50	.0019 666	.0012 816	.0008 290	.0005 325 ⁺	.0003 398	.0002 154
.51	.0028 455 ⁻	.0018 902	.0012 463	.0008 161	.0005 308	.0003 431
.52	.0040 628	.0027 497	.0018 474	.0012 327	.0008 171	.0005 381
.53	.0057 262	.0039 470	.0027 009	.0018 356	.0012 393	.0008 310
.54	.0079 687	.0059 918	.0038 958	.0026 957	.0018 532	.0012 662
.55	.0109 522	.0078 211	.0055 454	.0039 053	.0027 327	.0019 001
.56	.0148 702	.0108 021	.0077 917	.0055 827	.0039 745 ⁻	.0028 121
.57	.0199 488	.0147 357	.0108 091	.0078 764	.0057 032	.0041 041
.58	.0264 475 ⁺	.0198 582	.0148 080	.0109 699	.0080 759	.0059 101
.59	.0346 575 ⁺	.0264 420	.0200 369	.0150 851	.0112 870	.0083 951
.60	.0448 973	.0347 938	.0267 831	.0204 851	.0155 726	.0117 691
.61	.0575 060	.0452 502	.0353 712	.0274 748	.0212 129	.0162 841
.62	.0728 333	.0581 710	.0461 584	.0363 992	.0285 333	.0222 401
.63	.0912 257	.0739 275 ⁻	.0595 267	.0476 386	.0379 023	.0299 871
.64	.1130 101	.0928 880	.0758 705 ⁻	.0615 992	.0497 255 ⁻	.0399 201
.65	.1384 739	.1153 995 ⁺	.0955 803	.0786 997	.0644 357	.0524 721
.66	.1678 428	.1417 654	.1190 221	.0993 531	.0824 772	.0681 051
.67	.2012 575 ⁺	.1722 208	.1465 129	.1239 431	.1042 848	.0872 891
.68	.2387 510	.2069 069	.1782 926	.1527 964	.1302 576	.1104 811
.69	.2802 271	.2458 451	.2144 960	.1861 522	.1607 277	.1380 901
.70	.3254 436	.2889 137	.2551 235 ⁺	.2241 297	.1959 254	.1704 501
.71	.3740 015 ⁺	.3358 296	.3000 161	.2666 972	.2359 438	.2077 691
.72	.4253 424	.3861 369	.3488 356	.3136 438	.2807 043	.2501 021
.73	.4787 556	.4392 058	.4010 543	.3645 605 ⁺	.3299 279	.2973 062
.74	.5333 969	.4942 426	.4559 553	.4188 299	.3831 152	.3490 131
.75	.5883 185 ⁻	.5503 132	.5126 473	.4756 308	.4395 397	.4046 121
.76	.6425 091	.6063 791	.5700 942	.5339 594	.4982 582	.4632 481
.77	.6949 439	.6613 456	.6271 594	.5926 666	.5581 393	.5238 341
.78	.7446 302	.7123 302	.6826 504	.6507 702	.6195 702	.5890 702

TABLE I. THE $L_x(p, q)$ FUNCTION $x = .38$ to $.98$ $q = 10$

p	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$
$B(p, q)$	$.6796\ 0500 \times 10^0$	$.5215\ 5732 \times 10^0$	$.4030\ 2157 \times 10^0$	$.3134\ 0122 \times 10^0$	$.245$
x					
.38	.0000 001				
.39	.0000 002	.0000 001			
.40	.0000 004	.0000 002	.0000 001	.0000 001	
.41	.0000 008	.0000 004	.0000 002	.0000 001	.0000
.42	.0000 015	.0000 008	.0000 004	.0000 002	.0000
.43	.0000 028	.0000 015	.0000 008	.0000 004	.0000
.44	.0000 052	.0000 029	.0000 016	.0000 009	.0000
.45	.0000 093	.0000 053	.0000 030	.0000 017	.0000
.46	.0000 165	.0000 095	.0000 055	.0000 031	.0000
.47	.0000 287	.0000 166	.0000 099	.0000 058	.0000
.48	.0000 490	.0000 295	.0000 177	.0000 105	.0000
.49	.0000 823	.0000 505	.0000 309	.0000 188	.0000
.50	.0001 358	.0000 851	.0000 530	.0000 329	.0000
.51	.0002 205	.0001 409	.0000 865	.0000 566	.0000
.52	.0003 524	.0002 295	.0001 486	.0000 957	.0000
.53	.0005 547	.0003 679	.0002 428	.0001 593	.0000
.54	.0008 601	.0005 810	.0003 993	.0002 600	.0001
.55	.0013 140	.0009 045	.0006 180	.0004 205	.0002
.56	.0019 787	.0013 845	.0009 636	.0006 673	.0004
.57	.0029 376	.0020 800	.0014 803	.0010 429	.0007
.58	.0043 006	.0031 125	.0022 410	.0016 056	.0011
.59	.0062 009	.0045 686	.0034 139	.0024 355	.0017
.60	.0088 457	.0069 131	.0049 189	.0036 410	.0026
.61	.0124 322	.0094 416	.0071 344	.0053 651	.0040
.62	.0172 418	.0132 923	.0102 044	.0077 917	.0059
.63	.0235 989	.0184 764	.0133 949	.0111 624	.0086
.64	.0318 797	.0253 304	.0200 293	.0157 643	.0123
.65	.0425 090	.0342 667	.0274 910	.0219 543	.0174
.66	.0559 522	.0457 135	.0372 223	.0301 521	.0243
.67	.0722 008	.0602 603	.0491 189	.0408 499	.0334
.68	.0912 520	.0783 494	.0645 165	.0545 518	.0452
.69	.1180 801	.1065 064	.0851 206	.0748 629	.0603
.70	.1476 028	.1272 475	.1092 271	.0933 691	.0794
.71	.1821 402	.1589 894	.1381 843	.1196 222	.1031
.72	.2218 722	.1960 041	.1724 469	.1511 253	.1319
.73	.2667 947	.2384 468	.2122 750	.1882 567	.1663
.74	.3166 806	.2862 291	.2577 300	.2312 177	.2066
.75	.3710 503	.3390 144	.3086 253	.2799 748	.2511
.76	.4391 570	.3991 815	.3644 863	.3342 038	.3054
.77	.4899 913	.4508 246	.4245 262	.3942 612	.3631
.78	.5523 110	.5197 599	.4876 471	.4564 596	.4255
.79	.6146 952	.5845 697	.5524 217	.5215 569	.4910
.80	.6756 239	.6466 848	.6124 515	.5824 515	.5531

TABLES OF THE INCOMPLETE β -FUNCTION

0.99

$q = 10$

$p = 39$ to

$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$= .1528\ 8846 \times \frac{1}{10^6}$	$.1216\ 8674 \times \frac{1}{10^6}$	$.9734\ 9389 \times \frac{1}{10^1}$	$.7826\ 1273 \times \frac{1}{10^{11}}$	$.6321\ 1028 \times \frac{1}{10^{11}}$	$.5128\ 4419 \times \frac{1}{10^{11}}$
.0000 001					
.0000 001	.0000 001				
.0000 003	.0000 002	.0000 001			
.0000 005	.0000 003	.0000 002	.0000 001	.0000 001	
.0000 011	.0000 006	.0000 004	.0000 002	.0000 001	.0000 001
.0000 022	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
.0000 041	.0000 024	.0000 015	.0000 009	.0000 005 ⁺	.0000 003
.0000 076	.0000 046	.0000 028	.0000 017	.0000 010	.0000 006
.0000 139	.0000 086	.0000 053	.0000 033	.0000 020	.0000 012
.0000 249	.0000 157	.0000 099	.0000 062	.0000 039	.0000 024
.0000 438	.0000 282	.0000 181	.0000 116	.0000 074	.0000 047
.0000 758	.0000 497	.0000 325 ⁺	.0000 212	.0000 137	.0000 089
.0001 288	.0000 861	.0000 573	.0000 380	.0000 251	.0000 165 ⁺
.0002 155 ⁺	.0001 466	.0000 993	.0000 670	.0000 450 ⁺	.0000 302
.0003 547	.0002 454	.0001 692	.0001 161	.0000 794	.0000 541
.0005 744	.0004 043	.0002 834	.0001 979	.0001 377	.0000 955 ⁻
.0009 156	.0006 552	.0004 670	.0003 316	.0002 346	.0001 654
.0014 371	.0010 453	.0007 573	.0005 466	.0003 931	.0002 817
.0022 210	.0016 415 ⁺	.0012 085 ⁻	.0008 863	.0006 477	.0004 717
.0033 809	.0025 382	.0018 982	.0014 142	.0010 499	.0007 767
.0050 694	.0038 647	.0029 351	.0022 208	.0016 744	.0012 581
.0074 882	.0057 954	.0044 683	.0034 325 ⁻	.0026 275 ⁻	.0020 044
.0108 977	.0085 596	.0066 979	.0052 222	.0040 574	.0031 418
.0156 261	.0124 524	.0098 865 ⁻	.0078 212	.0061 661	.0048 450 ⁺
.0220 768	.0178 441	.0143 701	.0115 316	.0092 223	.0073 512
.0307 323	.0251 872	.0205 682	.0167 377	.0135 749	.0109 740
.0421 521	.0350 188	.0289 894	.0239 158	.0196 649	.0161 178
.0569 628	.0479 554	.0402 316	.0336 381	.0280 337	.0232 894
.0758 372	.0646 784	.0549 731	.0465 697	.0393 247	.0331 042
.0994 618	.0859 065 ⁺	.0739 508	.0634 530	.0542 750 ⁺	.0462 837
.1284 899	.1123 541	.0979 247	.0850 790	.0736 922	.0636 400
.1634 817	.1446 742	.1276 252	.1122 395 ⁻	.0984 144	.0860 425 ⁻
.2048 338	.1833 876	.1636 839	.1456 622	.1292 497	.1143 638
.2527 019	.2288 016	.2065 504	.1859 274	.1668 953	.1494 034
.3069 260	.2809 257	.2564 010	.2333 717	.2118 393	.1917 891
.3669 664	.3393 939	.3130 483	.2879 879	.2642 521	.2418 631
.4318 645 ⁺	.4034 061	.3758 655 ⁺	.3493 325 ⁺	.3238 798	.2995 635 ⁺
.5002 387	.4717 042	.4437 404	.4164 587	.3899 564	.3643 170
.5703 274	.5425 934	.5150 744	.4878 909	.4611 540	.4349 643
.6400 845 ⁻	.6140 214	.5878 410	.5616 606	.5355 254	.5097 425 ⁺
.7073 260	.6837 160	.6597 106	.6354 124	.6109 233	.5863 430
.7699 179	.7493 754	.7282 372	.7065 834	.6844 966	.6620 605 ⁻
.8259 842	.8088 915 ⁻	.7910 937	.7726 447	.7536 628	.7340 294
.8741 062	.8605 767	.8463 234	.8313 748	.8157 643	.7995 203

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .48$ to $.99$ $q = 10$

	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) =$	$.4178\ 7305 \times \frac{1}{101}$	$.3418\ 9613 \times \frac{1}{101}$	$.2808\ 4325 \times \frac{1}{101}$	$.2315\ 7250 \times \frac{1}{101}$	$.1916\ 4621 \times \frac{1}{101}$
$.48$	.0000 001				
$.49$	.0000 002	.0000 001	.0000 001		
$.50$	.0000 004	.0000 002	.0000 001	.0000 001	
$.51$	.0000 007	.0000 005			
$.52$	.0000 015 ⁺	.0000 009	.0000 003	.0000 002	.0000 001
$.53$	.0000 030	.0000 019	.0000 006	.0000 004	.0000 002
$.54$	.0000 057	.0000 037	.0000 012	.0000 007	.0000 005
$.55$	.0000 108	.0000 071	.0000 023	.0000 015	.0000 010
$.56$	.0000 201	.0000 134	.0000 046	.0000 030	.0000 019
$.57$	.0000 368	.0000 249	.0000 089	.0000 059	.0000 039
$.58$	.0000 660	.0000 454	.0000 168	.0000 113	.0000 076
$.59$	.0001 162	.0000 814	.0000 312	.0000 213	.0000 146
$.60$	.0002 012	.0001 432	.0000 568	.0000 395 ⁺	.0000 274
			.0001 016	.0000 719	.0000 507
$.61$	.0003 423	.0002 477	.0001 786	.0001 284	.0000 921
$.62$	.0005 727	.0004 210	.0003 085	.0002 253	.0001 641
$.63$	.0009 422	.0007 033	.0005 234	.0003 884	.0002 874
$.64$	.0015 242	.0011 553	.0008 730	.0006 578	.0004 942
$.65$	.0024 250	.0018 658	.0014 313	.0010 947	.0008 350
$.66$	.0037 948	.0029 630	.0023 066	.0017 905	.0013 859
$.67$	.0058 411	.0046 271	.0036 545	.0028 781	.0022 603
$.68$	.0088 436	.0071 053	.0056 919	.0045 467	.0036 221
$.69$	.0131 698	.0107 288	.0087 149	.0070 593	.0057 027
$.70$	.0192 892	.0159 290	.0131 166	.0107 710	.0088 212
$.71$	.0277 842	.0232 516	.0194 038	.0161 488	.0134 043
$.72$	.0393 531	.0333 651	.0282 101	.0237 878	.0200 068
$.73$	.0548 010	.0470 580	.0402 997	.0344 214	.0293 257
$.74$	.0750 146	.0652 219	.0565 574	.0489 180	.0422 048
$.75$	.1009 158	.0888 126	.0779 592	.0682 604	.0596 224
$.76$	.1333 904	.1187 866	.1055 162	.0934 993	.0826 542
$.77$	.1731 926	.1560 094	.1401 896	.1256 758	.1124 048
$.78$	.2208 277	.2011 386	.1827 763	.1657 111	.1499 044
$.79$	.2764 244	.2544 885 ⁺	.2337 687	.2142 655 ⁺	.1959 691
$.80$	.3396 099	.3158 911	.2932 036	.2715 780	.2510 337
$.81$	.4094 115 ⁺	.3845 742	.3605 198	.3373 047	.3149 747
$.82$	.4842 098	.4590 857	.4344 531	.4103 865 ⁺	.3869 517
$.83$	.5617 684	.5372 921	.5130 020	.4889 806	.4653 045 ⁺
$.84$	.6393 592	.6164 763	.5934 939	.5704 920	.5475 476
$.85$	.7139 890	.6935 478	.6727 732	.6517 335	.6304 965 ⁺
$.86$	.7827 113	.7653 551	.7475 084	.7292 213	.7105 456
$.87$	.8429 840	.8290 670	.8145 904	.7995 840	.7840 805 ⁺
$.88$	.8930 113	.8825 575	.8715 582	.8600 254	.8479 735 ⁺
$.89$	.9319 948	.9247 133	.9169 648	.9087 482	.9000 642
$.90$	.9602 248	.9555 833	.9505 887	.9452 327	.9395 085 ⁺

TABLES OF THE INCOMPLETE β -FUNCTION

07 to 70

$q = 10.5$

$p = 10$

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$p, q) = .5278\ 9627 \times \frac{1}{10^5}$	$.3710\ 6519 \times \frac{1}{10^5}$	$.1898\ 4731 \times \frac{1}{10^5}$	$.1012\ 5190 \times \frac{1}{10^5}$	$.5601\ 1688 \times \frac{1}{10^7}$	$.3200\ 66$	
$\%$						
07	.0000 001					
08	.0000 003	.0000 001				
09	.0000 008	.0000 003	.0000 001			
10	.0000 023	.0000 010	.0000 002			
11	.0000 057	.0000 026	.0000 005 ⁺	.0000 001		
12	.0000 129	.0000 060	.0000 013	.0000 003	.0000 001	
13	.0000 272	.0000 132	.0000 031	.0000 007	.0000 001	
14	.0000 536	.0000 271	.0000 067	.0000 016	.0000 004	
15	.0001 002	.0000 524	.0000 139	.0000 036	.0000 009	
16	.0001 787	.0000 964	.0000 273	.0000 075 ⁻	.0000 020	
17	.0003 054	.0001 697	.0000 510	.0000 148	.0000 042	
18	.0005 028	.0002 873	.0000 913	.0000 281	.0000 084	
19	.0008 006	.0004 696	.0001 574	.0000 511	.0000 161	
20	.0012 369	.0007 440	.0002 621	.0000 894	.0000 296	
21	.0018 596	.0011 454	.0004 232	.0001 514	.0000 527	
22	.0027 273	.0017 180	.0006 641	.0002 487	.0000 905 ⁺	
23	.0039 098	.0025 164	.0010 157	.0003 972	.0001 510	
24	.0054 891	.0036 061	.0015 167	.0006 183	.0002 451	
25	.0075 590	.0050 643	.0022 157	.0009 397	.0003 876	
26	.0102 249	.0069 803	.0031 714	.0013 971	.0005 987	
27	.0136 032	.0094 552	.0044 543	.0020 351	.0009 046	
28	.0178 191	.0126 015 ⁻	.0061 466	.0029 084	.0013 392	
29	.0230 055 ⁺	.0165 416	.0083 429	.0040 829	.0019 448	
30	.0293 000	.0214 066	.0111 496	.0056 364	.0027 738	
31	.0368 420	.0273 336	.0146 847	.0076 593	.0038 899	
32	.0457 696	.0344 633	.0190 764	.0102 546	.0053 687	
33	.0562 154	.0429 368	.0244 614	.0135 377	.0072 987	
34	.0683 033	.0528 918	.0309 821	.0176 355 ⁻	.0097 815 ⁻	
35	.0821 437	.0644 588	.0387 847	.0226 849	.0129 321	
36	.0978 300	.0777 570	.0480 147	.0288 310	.0168 780	
37	.1154 349	.0928 902	.0588 140	.0362 242	.0217 581	
38	.1350 066	.1099 427	.0713 158	.0450 174	.0277 211	
39	.1565 659	.1289 755 ⁺	.0856 473	.0553 615 ⁺	.0349 227	
40	.1801 039	.1500 231	.1018 943	.0674 019	.0435 226	
41	.2055 800	.1730 900	.1201 571	.0812 735 ⁻	.0536 811	
42	.2329 213	.1981 492	.1404 868	.0970 958	.0655 538	
43	.2620 221	.2251 403	.1629 109	.1149 682	.0792 879	
44	.2927 449	.2539 688	.1874 245 ⁺	.1349 655 ⁻	.0950 158	
45	.3249 218	.2845 066	.2139 882	.1571 326	.1128 509	
46	.3583 573	.3165 932	.2425 257	.1814 817	.1328 813	
47	.3928 310	.3500 375 ⁻	.2729 240	.2079 880	.1551 651	
48	.4281 024	.3846 212	.3050 336	.2365 882	.1797 258	
49	.4639 146	.4201 028	.3386 697	.2671 783	.2065 480	
50	.5000 000 ⁶	.4562 215 ⁻	.3736 154	.2996 141	.2355 745 ⁻	
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TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.95$ $q = 10.5$

	$p = 10.5$	$p = 11$	$p = 12$	$p = 13$	$p = 14$
$B(p, q) = .5278\ 9627 \times \frac{1}{10^8}$		$.3710\ 6519 \times \frac{1}{10^8}$	$.1898\ 4731 \times \frac{1}{10^8}$	$.1012\ 5190 \times \frac{1}{10^8}$	$.5601\ 16$
x					
.71	.9769 945 ⁻	.9717 812	.9589 526	.9426 336	.9225 80
.72	.9821 809	.9780 195 ⁻	.9676 687	.9543 161	.9376 76
.73	.9863 968	.9831 258	.9749 028	.9641 479	.9505 59
.74	.9897 751	.9872 456	.9808 198	.9723 003	.9613 88
.75	.9924 410	.9905 188	.9855 848	.9789 547	.9703 48
.76	.9945 109	.9930 771	.9893 590	.9842 961	.9776 36
.77	.9960 902	.9950 419	.9922 960	.9885 076	.9834 59
.78	.9972 727	.9965 227	.9945 383	.9917 650 ⁺	.9880 21
.79	.9981 404	.9976 161	.9962 154	.9942 328	.9915 21
.80	.9987 631	.9984 059	.9974 422	.9960 608	.9941 48
.81	.9991 994	.9989 628	.9983 180	.9973 823	.9960 70
.82	.9994 972	.9993 451	.9989 269	.9983 123	.9974 40
.83	.9996 946	.9996 002	.9993 379	.9989 479	.9983 87
.84	.9998 213	.9997 648	.9996 065 ⁺	.9993 683	.9990 21
.85	.9998 998	.9998 674	.9997 758	.9996 364	.9994 31
.86	.9999 464	.9999 287	.9998 782	.9998 005 ⁻	.9996 84
.87	.9999 728	.9999 637	.9999 374	.9998 964	.9998 34
.88	.9999 871	.9999 827	.9999 698	.9999 495 ⁻	.9999 18
.89	.9999 943	.9999 923	.9999 865 ⁻	.9999 771	.9999 62
.90	.9999 977	.9999 969	.9999 944	.9999 905 ⁺	.9999 84
.91	.9999 992	.9999 989	.9999 979	.9999 965 ⁻	.9999 94
.92	.9999 997	.9999 996	.9999 993	.9999 988	.9999 98
.93	.9999 999	.9999 999	.9999 998	.9999 997	.9999 99
.94	1.0000 000	1.0000 000	1.0000 000	.9999 999	.9999 99
.95				1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

to 70

$q = 10.5$

$p = 16$

$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$= .1882\ 7458 \times \frac{1}{10^7}$	$.1136\ 7522 \times \frac{1}{10^7}$	$.7027\ 1954 \times \frac{1}{10^8}$	$.4438\ 2286 \times \frac{1}{10^8}$	$.2858\ 5201 \times \frac{1}{10^8}$	$.1874\ 4394 \times \frac{1}{10^8}$
.0000 001					
.0000 001					
.0000 003	.0000 001				
.0000 007	.0000 002	.0000 001			
.0000 015 ⁻	.0000 004	.0000 001			
.0000 030	.0000 009	.0000 003	.0000 001		
.0000 059	.0000 019	.0000 006	.0000 002	.0000 001	
.0000 111	.0000 038	.0000 013	.0000 004	.0000 001	
.0000 203	.0000 072	.0000 025 ⁺	.0000 009	.0000 003	.0000 001
.0000 358	.0000 132	.0000 048	.0000 017	.0000 006	.0000 002
.0000 613	.0000 236	.0000 089	.0000 033	.0000 012	.0000 004
.0001 023	.0000 409	.0000 161	.0000 062	.0000 024	.0000 009
.0001 663	.0000 691	.0000 282	.0000 113	.0000 045 ⁻	.0000 017
.0002 643	.0001 138	.0000 481	.0000 200	.0000 082	.0000 033
.0004 109	.0001 831	.0000 801	.0000 344	.0000 146	.0000 061
.0006 260	.0002 882	.0001 303	.0000 579	.0000 253	.0000 109
.0009 354	.0004 447	.0002 076	.0000 953	.0000 431	.0000 192
.0013 726	.0006 730	.0003 240	.0001 534	.0000 715 ⁺	.0000 329
.0019 799	.0010 002	.0004 962	.0002 421	.0001 163	.0000 551
.0028 099	.0014 610	.0007 461	.0003 748	.0001 854	.0000 904
.0039 268	.0020 997	.0011 029	.0005 698	.0002 900	.0001 455 ⁺
.0054 079	.0029 711	.0016 036	.0008 515 ⁻	.0004 454	.0002 297
.0073 440	.0041 422	.0022 956	.0012 517	.0006 723	.0003 561
.0098 410	.0056 939	.0032 374	.0018 113	.0009 984	.0005 428
.0130 194	.0077 217	.0045 010	.0025 820	.0014 594	.0008 136
.0170 144	.0103 365 ⁺	.0061 727	.0036 281	.0021 014	.0012 006
.0219 749	.0136 654	.0083 547	.0050 281	.0029 822	.0017 450 ⁻
.0280 622	.0178 511	.0111 659	.0068 762	.0041 737	.0024 995 ⁻
.0354 467	.0230 510	.0147 423	.0092 839	.0057 633	.0035 303
.0443 055 ⁻	.0294 357	.0192 367	.0123 808	.0078 558	.0049 192
.0548 178	.0371 860	.0248 178	.0163 146	.0105 750 ⁺	.0067 653
.0671 600	.0464 896	.0316 678	.0212 513	.0140 639	.0091 873
.0815 003	.0575 368	.0399 800	.0273 732	.0184 854	.0123 240
.0979 922	.0705 144	.0499 544	.0348 772	.0240 215 ⁺	.0163 357
.1167 683	.0856 001	.0617 930	.0439 708	.0308 715 ⁻	.0214 039
.1379 332	.1029 553	.0756 931	.0548 678	.0392 489	.0277 299
.1615 571	.1227 179	.0918 407	.0677 823	.0493 776	.0355 326
.1876 698	.1449 947	.1104 027	.0829 213	.0614 858	.0450 448
.2162 553	.1698 540	.1315 184	.1004 772	.0757 994	.0565 076
.2472 472	.1973 190	.1552 912	.1206 183	.0925 333	.0701 635 ⁺
.2805 261	.2273 615 ⁺	.1817 807	.1434 801	.1118 821	.0862 483
.3159 183	.2598 974	.2109 045 ⁻	.1691 553	.1340 104	.1049 807
.3531 958	.2947 834	.2428 823	.1976 851	.1590 415 ⁻	.1265 519
.3920 796	.3318 162	.2773 310	.2290 510	.1870 474	.1511 134
.4322 437	.3707 320	.3141 611	.2631 670	.2180 300	.1787 651 ⁻

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.96$ $q = 10.5$

	$p = 16$	$p = 17$	$p = 18$	$p = 19$	$p = 20$
$B(p, q) = .1882\ 7458 \times \frac{1}{10^7}$	$.1136\ 7522 \times \frac{1}{10^7}$	$.7027\ 1954 \times \frac{1}{10^8}$	$.4438\ 2286 \times \frac{1}{10^8}$	$.2858\ 1000 \times \frac{1}{10^8}$	$.1882\ 7458 \times \frac{1}{10^7}$
$.71$	.8709 651	.8396 033	.8048 932	.7672 423	.7271 100
$.72$	.8939 179	.8667 806	.8363 229	.8028 194	.7666 000
$.73$	.9140 555 ⁺	.8909 576	.8646 734	.8353 593	.8032 000
$.74$	.9314 532	.9121 328	.8898 461	.8646 498	.8366 000
$.75$	.9462 409	.9303 759	.9118 279	.8905 750 ⁺	.8666 000
$.76$	.9585 947	.9458 208	.9306 875 ⁺	.9131 160	.8930 000
$.77$	.9687 269	.9586 556	.9465 672	.9323 465 ⁺	.9159 000
$.78$	.9768 744	.9691 113	.9596 721	.9484 238	.9352 000
$.79$	.9832 886	.9774 484	.9702 565 ⁻	.9615 762	.9512 000
$.80$	.9882 236	.9839 446	.9786 084	.9720 865 ⁻	.9642 000
$.81$	.9919 272	.9888 810	.9850 346	.9802 748	.9744 000
$.82$	.9946 319	.9925 307	.9898 448	.9864 800	.9823 000
$.83$	.9965 489	.9951 492	.9933 382	.9910 417	.9881 000
$.84$	.9978 635 ⁻	.9969 664	.9957 918	.9942 844	.9923 000
$.85$	.9987 322	.9981 817	.9974 523	.9965 051	.9952 000
$.86$	.9992 830	.9989 613	.9985 301	.9979 635 ⁺	.9972 000
$.87$	.9996 162	.9994 384	.9991 974	.9988 770	.9984 000
$.88$	.9998 072	.9997 151	.9995 888	.9994 189	.9991 000
$.89$	.9999 101	.9998 658	.9998 045 ⁻	.9997 210	.9996 000
$.90$	.9999 616	.9999 422	.9999 149	.9998 774	.9998 000
$.91$	.9999 853	.9999 776	.9999 667	.9999 516	.9999 300
$.92$	.9999 951	.9999 924	.9999 886	.9999 832	.9999 700
$.93$	.9999 986	.9999 978	.9999 967	.9999 951	.9999 900
$.94$	.9999 997	.9999 995 ⁻	.9999 992	.9999 988	.9999 900
$.95$	.9999 999	.9999 999	.9999 999	.9999 998	.9999 900
$.96$	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

4 to .80

$q = 10.5$

$p = 22$

$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$
$q) = .1249\ 6263 \times \frac{1}{10^8}$	$.8459\ 0088 \times \frac{1}{10^8}$	$.5807\ 6777 \times \frac{1}{10^8}$	$.4040\ 1236 \times \frac{1}{10^8}$	$.2845\ 1575 \times \frac{1}{10^8}$	$.2026\ 6875 \times \frac{1}{10^8}$
.0000 001	.0000 001				
.0000 002	.0000 001				
.0000 003	.0000 001				
.0000 007	.0000 003	.0000 001			
.0000 013	.0000 005 ⁺	.0000 002	.0000 001		
.0000 025 ⁺	.0000 010	.0000 004	.0000 002	.0000 001	
.0000 047	.0000 020	.0000 008	.0000 003	.0000 001	.0000 001
.0000 084	.0000 037	.0000 016	.0000 007	.0000 003	.0000 001
.0000 149	.0000 067	.0000 030	.0000 013	.0000 006	.0000 002
.0000 258	.0000 119	.0000 054	.0000 025 ⁻	.0000 011	.0000 005 ⁻
.0000 435 ⁺	.0000 207	.0000 097	.0000 045 ⁺	.0000 021	.0000 010
.0000 721	.0000 353	.0000 171	.0000 082	.0000 039	.0000 018
.0001 169	.0000 588	.0000 293	.0000 144	.0000 070	.0000 034
.0001 862	.0000 962	.0000 492	.0000 248	.0000 124	.0000 062
.0002 913	.0001 545 ⁻	.0000 810	.0000 420	.0000 216	.0000 110
.0004 478	.0002 436	.0001 310	.0000 697	.0000 368	.0000 192
.0006 773	.0003 776	.0002 082	.0001 136	.0000 614	.0000 329
.0010 082	.0005 757	.0003 251	.0001 817	.0001 006	.0000 552
.0014 782	.0008 640	.0004 996	.0002 859	.0001 620	.0000 910
.0021 357	.0012 771	.0007 554	.0004 423	.0002 565 ⁺	.0001 474
.0030 425 ⁻	.0018 602	.0011 251	.0006 736	.0003 995 ⁻	.0002 348
.0042 755 ⁻	.0026 712	.0016 511	.0010 103	.0006 124	.0003 679
.0059 292	.0037 834	.0023 885 ⁺	.0014 929	.0009 244	.0005 674
.0081 181	.0052 877	.0034 079	.0021 747	.0013 749	.0008 616
.0109 776	.0072 952	.0047 975 ⁻	.0031 240	.0020 156	.0012 891
.0146 662	.0099 391	.0066 660	.0044 274	.0029 137	.0019 009
.0193 649	.0133 764	.0091 453	.0061 924	.0041 549	.0027 639
.0252 775 ⁺	.0177 889	.0123 923	.0085 505 ⁻	.0058 467	.0039 639
.0326 279	.0233 830	.0165 900	.0116 594	.0081 212	.0056 091
.0416 575 ⁻	.0303 882	.0219 486	.0157 050 ⁻	.0111 384	.0078 338
.0526 192	.0390 543	.0287 037	.0209 019	.0150 880	.0108 014
.0657 717	.0496 464	.0371 142	.0274 932	.0201 908	.0147 070
.0813 999	.0624 383	.0474 577	.0357 478	.0266 984	.0197 791
.0996 551	.0777 037	.0600 232	.0459 562	.0348 911	.0262 795 ⁻
.1208 432	.0957 052	.0751 030	.0584 238	.0450 737	.0345 015 ⁺
.1451 118	.1166 822	.0929 805 ⁻	.0734 611	.0575 685 ⁻	.0447 657
.1725 870	.1408 362	.1139 171	.0913 723	.0727 052	.0574 125 ⁺
.2033 300	.1683 168	.1381 370	.1124 401	.0908 084	.0727 917
.2373 254	.1992 064	.1658 108	.1369 096	.1121 819	.0912 488
.2744 705 ⁺	.2335 060	.1970 387	.1649 703	.1370 900	.1131 076
.3145 680	.2711 236	.2318 349	.1967 369	.1657 384	.1386 505 ⁻
.3573 219	.3118 644	.2701 127	.2322 317	.1982 525 ⁻	.1680 959
.4023 385 ⁻	.3554 256	.3116 742	.2713 682	.2346 576	.2015 756
.4491 314	.4013 961	.3562 033	.3139 386	.2748 606	.2391 118

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.97$ $q = 10.5$

	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$B(p, q) = .1249\ 6263 \times \frac{x}{10^8}$		$.8459\ 0088 \times \frac{x}{10^8}$	$.5807\ 6777 \times \frac{x}{10^8}$	$.4040\ 1236 \times \frac{x}{10^8}$	$.2845\ 157$
x					
.81	.9594 538	.9500 267	.9392 367	.9270 373	.9134 007
.82	.9713 741	.9643 746	.9562 644	.9469 816	.9364 771
.83	.9804 627	.9754 482	.9695 670	.9627 535	.9549 492
.84	.9871 608	.9837 077	.9796 091	.9748 035	.9692 328
.85	.9919 140	.9896 391	.9869 067	.9836 648	.9798 620
.86	.9951 474	.9937 215	.9919 886	.9899 085	.9874 398
.87	.9972 443	.9963 998	.9953 615 ⁺	.9941 007	.9925 869
.88	.9985 318	.9980 632	.9974 805 ⁺	.9967 647	.9958 955
.89	.9992 741	.9990 331	.9987 300	.9983 535 ⁺	.9978 911
.90	.9996 716	.9995 583	.9994 142	.9992 333	.9990 085
.91	.9998 665	.9998 187	.9997 573	.9996 792	.9995 812
.92	.9999 524	.9999 348	.9999 119	.9998 824	.9998 450
.93	.9999 857	.9999 802	.9999 729	.9999 635 ⁺	.9999 515
.94	.9999 965 ⁺	.9999 951	.9999 933	.9999 909	.9999 878
.95	.9999 994	.9999 991	.9999 988	.9999 983	.9999 977
.96	.9999 999	.9999 999	.9999 999	.9999 998	.9999 997
.97	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

to .98

$q = 10.5$

$p = 28$ t

$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$
$\gamma = .1459\ 2150 \times \frac{1}{10^9}$	$.1061\ 2473 \times \frac{1}{10^9}$	$.7791\ 4357 \times \frac{1}{10^{10}}$	$.5771\ 4338 \times \frac{1}{10^{10}}$	$.4311\ 1915 \times \frac{1}{10^{10}}$	$.3246\ 0736 \times \frac{1}{10^{10}}$
.0000 001	.0000 001				
.0000 002	.0000 002				
.0000 004	.0000 002	.0000 001			
.0000 008	.0000 004	.0000 002	.0000 001		
.0000 016	.0000 008	.0000 004	.0000 002	.0000 001	
.0000 030	.0000 015 ⁻	.0000 007	.0000 003	.0000 002	.0000 001
.0000 056	.0000 028	.0000 014	.0000 007	.0000 003	.0000 002
.0000 099	.0000 051	.0000 026	.0000 013	.0000 007	.0000 003
.0000 174	.0000 092	.0000 048	.0000 025 ⁻	.0000 013	.0000 007
.0000 300	.0000 162	.0000 087	.0000 046	.0000 024	.0000 013
.0000 507	.0000 280	.0000 153	.0000 084	.0000 045 ⁺	.0000 024
.0000 840	.0000 475 ⁻	.0000 266	.0000 148	.0000 082	.0000 045 ⁺
.0001 368	.0000 791	.0000 454	.0000 259	.0000 146	.0000 082
.0002 192	.0001 295 ⁺	.0000 760	.0000 443	.0000 256	.0000 147
.0003 453	.0002 085 ⁺	.0001 250 ⁻	.0000 744	.0000 440	.0000 258
.0005 355 ⁻	.0003 302	.0002 021	.0001 228	.0000 741	.0000 445 ⁻
.0008 177	.0005 146	.0003 215 ⁻	.0001 995 ⁻	.0001 229	.0000 753
.0012 301	.0007 898	.0005 034	.0003 186	.0002 004	.0001 252
.0018 237	.0011 941	.0007 762	.0005 010	.0003 213	.0002 048
.0026 658	.0017 792	.0011 788	.0007 757	.0005 071	.0003 295 ⁻
.0038 432	.0026 133	.0017 643	.0011 830	.0007 881	.0005 218
.0054 661	.0037 855 ⁻	.0026 029	.0017 777	.0012 063	.0008 136
.0076 722	.0054 091	.0037 866	.0026 331	.0018 193	.0012 494
.0106 297	.0076 263	.0054 334	.0038 453	.0027 042	.0018 902
.0145 409	.0106 123	.0076 916	.0055 380	.0039 625 ⁻	.0028 182
.0196 438	.0145 781	.0107 448	.0078 679	.0057 255 ⁻	.0041 418
.0262 121	.0197 731	.0148 150 ⁻	.0110 286	.0081 596	.0060 015 ⁺
.0345 544	.0264 856	.0201 655 ⁻	.0152 558	.0114 714	.0085 757
.0450 085 ⁻	.0350 410	.0271 013	.0208 290	.0159 123	.0120 865 ⁻
.0579 347	.0457 970	.0359 675 ⁺	.0280 728	.0217 813	.0168 041
.0737 039	.0591 353	.0471 438	.0373 548	.0294 256	.0230 501
.0926 826	.0754 490	.0610 352	.0490 789	.0392 381	.0311 979
.1152 144	.0951 263	.0780 584	.0636 758	.0516 501	.0416 688
.1415 972	.1185 291	.0986 230	.0815 866	.0671 195 ⁻	.0549 241
.1720 591	.1459 687	.1231 081	.1032 422	.0861 126	.0714 508
.2067 327	.1776 782	.1518 347	.1290 364	.1090 806	.0917 408
.2456 295 ⁺	.2137 841	.1850 354	.1592 957	.1364 289	.1162 632
.2886 182	.2542 786	.2228 224	.1942 444	.1684 827	.1454 300
.3354 068	.2989 951	.2651 573	.2339 702	.2054 490	.1795 572
.3855 333	.3475 900	.3118 251	.2783 909	.2473 780	.2188 219
.4383 655 ⁻	.3995 333	.3624 150 ⁺	.3272 270	.2941 275 ⁻	.2632 208
.4931 125 ⁻	.4541 109	.4163 130	.3799 829	.3453 345 ⁻	.3125 322
.5488 491	.5104 403	.4727 069	.4359 421	.4003 988	.3662 883
.6045 525 ⁻	.5675 008	.5306 088	.4941 779	.4584 816	.4237 613
.6591 497	.6241 776	.5888 920	.5535 829	.5185 244	.4839 698
.7115 746	.6793 190	.6463 459	.6129 168	.5792 881	.5457 068
.7608 282	.7318 007	.7017 422	.6708 722	.6394 146	.6075 933
.8060 398	.7805 058	.7520 104	.7265 122		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .38$ to $.98$ $q = 10.5$

	$p = 34$	$p = 35$	$p = 36$	$p = 37$	$p = 38$
$B(p, q) = .2462\ 5386 \times \frac{1}{10^{10}}$	$.1881\ 4902 \times \frac{1}{10^{10}}$	$.1447\ 3001 \times \frac{1}{10^{10}}$	$.1120\ 4904 \times \frac{1}{10^{10}}$	$.8728\ 030$	
$\cdot 38$	.0000 001				
$\cdot 39$	.0000 002	.0000 001			
$\cdot 40$	.0000 003	.0000 002	.0000 001		
$\cdot 41$	.0000 007	.0000 003	.0000 002	.0000 001	
$\cdot 42$	.0000 013	.0000 007	.0000 004	.0000 002	.0000 001
$\cdot 43$	.0000 025 ⁻	.0000 013	.0000 007	.0000 004	.0000 002
$\cdot 44$	.0000 046	.0000 026	.0000 014	.0000 008	.0000 004
$\cdot 45$	.0000 084	.0000 048	.0000 027	.0000 015 ⁺	.0000 008
$\cdot 46$	.0000 151	.0000 088	.0000 051	.0000 029	.0000 017
$\cdot 47$	.0000 265 ⁺	.0000 157	.0000 093	.0000 054	.0000 032
$\cdot 48$	.0000 458	.0000 277	.0000 167	.0000 100	.0000 060
$\cdot 49$	.0000 778	.0000 480	.0000 295 ⁻	.0000 180	.0000 110
$\cdot 50$	.0001 297	.0000 817	.0000 512	.0000 319	.0000 198
$\cdot 51$	.0002 128	.0001 367	.0000 873	.0000 555 ⁻	.0000 351
$\cdot 52$	.0003 434	.0002 248	.0001 463	.0000 948	.0000 611
$\cdot 53$	.0005 455 ⁺	.0003 637	.0002 412	.0001 592	.0001 045 ⁺
$\cdot 54$	.0008 530	.0005 792	.0003 912	.0002 629	.0001 758
$\cdot 55$	.0013 137	.0009 080	.0006 243	.0004 271	.0002 908
$\cdot 56$	.0019 930	.0014 017	.0009 807	.0006 828	.0004 730
$\cdot 57$	.0029 792	.0021 314	.0015 170	.0010 744	.0007 573
$\cdot 58$	.0043 895 ⁻	.0031 933	.0023 112	.0016 645 ⁺	.0011 932
$\cdot 59$	.0063 755 ⁻	.0047 146	.0034 687	.0025 396	.0018 508
$\cdot 60$	.0091 302	.0068 608	.0051 296	.0038 167	.0028 268
$\cdot 61$	.0128 940	.0098 423	.0074 756	.0056 509	.0042 520
$\cdot 62$	.0179 594	.0139 212	.0107 380	.0082 436	.0063 000
$\cdot 63$	.0246 744	.0194 162	.0152 044	.0118 507	.0091 955 ⁻
$\cdot 64$	.0334 418	.0267 053	.0212 237	.0167 897	.0132 234
$\cdot 65$	.0447 151	.0362 251	.0292 088	.0234 446	.0187 360
$\cdot 66$	.0589 883	.0484 648	.0396 341	.0322 678	.0261 577
$\cdot 67$	.0767 787	.0639 531	.0530 276	.0437 757	.0359 854
$\cdot 68$	.0986 029	.0832 385 ⁺	.0699 549	.0585 384	.0487 819
$\cdot 69$	.1249 446	.1068 601	.0909 949	.0771 591	.0651 612
$\cdot 70$	.1562 153	.1353 106	.1167 053	.1002 449	.0857 642
$\cdot 71$	.1927 104	.1689 912	.1475 795 ⁻	.1283 654	.1112 208
$\cdot 72$	.2345 619	.2081 620	.1839 948	.1620 027	.1421 027
$\cdot 73$	.2816 931	.2528 903	.2261 572	.2014 922	.1788 637
$\cdot 74$	.3337 799	.3030 022	.2740 448	.2469 615 ⁺	.2217 741
$\cdot 75$	.3902 247	.3580 443	.3273 580	.2982 700	.2708 525 ⁺
$\cdot 76$	.4501 482	.4172 616	.3854 838	.3549 595 ⁻	.3258 046
$\cdot 77$	.5124 053	.4795 984	.4474 805 ⁻	.4162 235 ⁻	.3859 760
$\cdot 78$	.5756 273	.5437 272	.5120 913	.4809 037	.4503 313
$\cdot 79$	.6382 917	.6081 087	.5777 921	.5475 218	.5174 683
$\cdot 80$	.6988 164	.6710 824	.6428 730	.6143 501	.5856 730
$\cdot 81$	.7556 721	.7300 800	.7055 525 ⁺	.6805 202	.6550 027

TABLES OF THE INCOMPLETE β -FUNCTION

0.98

$q = 10.5$

$p = 4$

$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$= .5387\ 8753 \times \frac{1}{10^{11}}$	$.4267\ 6240 \times \frac{1}{10^{11}}$	$.3397\ 5259 \times \frac{1}{10^{11}}$	$.2718\ 0207 \times \frac{1}{10^{11}}$	$.2184\ 5774 \times \frac{1}{10^{11}}$	$.1763\ 695$
.0000 001					
.0000 001	.0000 001				
.0000 003	.0000 001	.0000 001			
.0000 005 ⁺	.0000 003	.0000 002			
.0000 011	.0000 006	.0000 004	.0000 001	.0000 001	.0000 001
.0000 021	.0000 012	.0000 007	.0000 002	.0000 001	.0000 001
.0000 040	.0000 024	.0000 014	.0000 004	.0000 002	.0000 001
.0000 075 ⁺	.0000 046	.0000 028	.0000 009	.0000 005 ⁺	.0000 003
			.0000 017	.0000 010	.0000 006
.0000 138	.0000 086	.0000 054			
.0000 250 ⁺	.0000 159	.0000 101	.0000 033	.0000 020	.0000 013
.0000 445 ⁻	.0000 288	.0000 186	.0000 064	.0000 040	.0000 025 ⁺
.0000 776	.0000 512	.0000 336	.0000 119	.0000 076	.0000 049
.0001 330	.0000 893	.0000 598	.0000 220	.0000 144	.0000 093
.0002 240	.0001 532	.0001 043	.0000 398	.0000 265 ⁻	.0000 175 ⁺
.0003 712	.0002 582	.0001 789	.0000 708	.0000 478	.0000 322
.0006 050 ⁻	.0004 280	.0003 017	.0001 235 ⁺	.0000 849	.0000 582
.0009 699	.0006 978	.0005 000 ⁻	.0002 118	.0001 481	.0001 032
.0015 303	.0011 189	.0008 150 ⁻	.0003 569	.0002 538	.0001 799
			.0005 913	.0004 275 ⁻	.0003 079
.0023 763	.0017 655 ⁻	.0013 066			
.0036 323	.0027 412	.0020 607	.0009 633	.0007 077	.0005 180
.0054 662	.0041 890	.0031 979	.0015 434	.0011 518	.0008 566
.0080 995 ⁺	.0063 011	.0048 834	.0024 323	.0018 434	.0013 923
.0118 177	.0093 301	.0073 386	.0037 708	.0029 014	.0022 249
.0169 796	.0136 005 ⁻	.0108 535 ⁻	.0057 512	.0044 915 ⁺	.0034 959
.0240 249	.0195 177	.0157 981	.0086 304	.0068 389	.0054 013
.0334 759	.0275 745 ⁻	.0226 317	.0127 423	.0102 426	.0082 061
.0459 336	.0383 516	.0319 078	.0185 104	.0150 887	.0122 597
.0620 636	.0525 088	.0442 708	.0264 559	.0218 630	.0180 096
			.0371 999	.0311 567	.0260 131
.0825 701	.0707 660	.0604 431			
.1081 565 ⁻	.0938 681	.0811 968	.0514 560	.0436 655 ⁺	.0369 400
.1394 701	.1225 362	.1073 102	.0700 099	.0601 757	.0515 664
.1770 352	.1574 011	.1395 053	.0936 811	.0815 337	.0707 516
.2211 749	.1989 242	.1783 695 ⁻	.1232 670	.1085 959	.0953 953
.2719 302	.2473 104	.2242 639	.1594 665 ⁻	.1421 570	.1263 720
.3289 850 ⁺	.3024 210	.2772 273	.2027 867	.1828 579	.1644 419
.3916 095 ⁺	.3637 005 ⁺	.3368 874	.2534 402	.2310 776	.2101 407
.4586 339	.4301 297	.4023 937	.3112 426	.2868 204	.2636 582
.5284 660	.5002 213	.4723 899	.3755 262	.3496 115 ⁻	.3247 186
			.4450 887	.4184 223	.3924 833
.5991 612	.5720 695 ⁻	.5450 406			
.6685 476	.6434 612	.6181 240	.5181 951	.4916 461	.4654 984
.7344 001	.7120 459	.6891 927	.5926 480	.5671 424	.5417 121
.7946 469	.7755 504	.7557 925 ⁺	.6659 343	.6423 648	.6185 783
.8475 823	.8320 141	.8157 150 ⁻	.7354 419	.7145 707	.6932 536
.8920 515 ⁺	.8800 066	.8672 477	.7987 270	.7810 971	.7628 761
.9275 737	.9187 806	.9093 767	.8537 932	.8396 660	.8248 934

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) =$	$\cdot 1430\ 0234 \times \frac{x}{10^{11}}$	$\cdot 1164\ 2668 \times \frac{x}{10^{11}}$	$\cdot 9516\ 6158 \times \frac{x}{10^{12}}$	$\cdot 7808\ 5052 \times \frac{x}{10^{12}}$
x				
$\cdot 48$	$\cdot 0000\ 001$			
$\cdot 49$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 50$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$
$\cdot 51$	$\cdot 0000\ 008$	$\cdot 0000\ 005^-$	$\cdot 0000\ 003$	$\cdot 0000\ 002$
$\cdot 52$	$\cdot 0000\ 016$	$\cdot 0000\ 010$	$\cdot 0000\ 006$	$\cdot 0000\ 004$
$\cdot 53$	$\cdot 0000\ 031$	$\cdot 0000\ 020$	$\cdot 0000\ 012$	$\cdot 0000\ 008$
$\cdot 54$	$\cdot 0000\ 060$	$\cdot 0000\ 039$	$\cdot 0000\ 025^+$	$\cdot 0000\ 016$
$\cdot 55$	$\cdot 0000\ 115^+$	$\cdot 0000\ 076$	$\cdot 0000\ 050^-$	$\cdot 0000\ 032$
$\cdot 56$	$\cdot 0000\ 216$	$\cdot 0000\ 145^-$	$\cdot 0000\ 096$	$\cdot 0000\ 064$
$\cdot 57$	$\cdot 0000\ 397$	$\cdot 0000\ 270$	$\cdot 0000\ 183$	$\cdot 0000\ 124$
$\cdot 58$	$\cdot 0000\ 717$	$\cdot 0000\ 496$	$\cdot 0000\ 343$	$\cdot 0000\ 236$
$\cdot 59$	$\cdot 0001\ 270$	$\cdot 0000\ 894$	$\cdot 0000\ 628$	$\cdot 0000\ 439$
$\cdot 60$	$\cdot 0002\ 211$	$\cdot 0001\ 582$	$\cdot 0001\ 129$	$\cdot 0000\ 803$
$\cdot 61$	$\cdot 0003\ 780$	$\cdot 0002\ 749$	$\cdot 0001\ 993$	$\cdot 0001\ 440$
$\cdot 62$	$\cdot 0006\ 349$	$\cdot 0004\ 691$	$\cdot 0003\ 455^-$	$\cdot 0002\ 537$
$\cdot 63$	$\cdot 0010\ 481$	$\cdot 0007\ 865^-$	$\cdot 0005\ 883$	$\cdot 0004\ 388$
$\cdot 64$	$\cdot 0017\ 006$	$\cdot 0012\ 957$	$\cdot 0009\ 841$	$\cdot 0007\ 453$
$\cdot 65$	$\cdot 0027\ 122$	$\cdot 0020\ 975^+$	$\cdot 0016\ 173$	$\cdot 0012\ 433$
$\cdot 66$	$\cdot 0042\ 522$	$\cdot 0033\ 371$	$\cdot 0026\ 111$	$\cdot 0020\ 371$
$\cdot 67$	$\cdot 0065\ 537$	$\cdot 0052\ 179$	$\cdot 0041\ 420$	$\cdot 0032\ 785^+$
$\cdot 68$	$\cdot 0099\ 297$	$\cdot 0080\ 182$	$\cdot 0064\ 556$	$\cdot 0051\ 828$
$\cdot 69$	$\cdot 0147\ 895^+$	$\cdot 0121\ 088$	$\cdot 0098\ 852$	$\cdot 0080\ 473$
$\cdot 70$	$\cdot 0216\ 524$	$\cdot 0179\ 696$	$\cdot 0148\ 705^+$	$\cdot 0122\ 718$
$\cdot 71$	$\cdot 0311\ 568$	$\cdot 0262\ 027$	$\cdot 0219\ 744$	$\cdot 0183\ 781$
$\cdot 72$	$\cdot 0440\ 591$	$\cdot 0375\ 375^+$	$\cdot 0318\ 929$	$\cdot 0270\ 244$
$\cdot 73$	$\cdot 0612\ 190$	$\cdot 0528\ 230$	$\cdot 0454\ 551$	$\cdot 0390\ 120$
$\cdot 74$	$\cdot 0835\ 645^+$	$\cdot 0730\ 017$	$\cdot 0636\ 054$	$\cdot 0552\ 759$
$\cdot 75$	$\cdot 1120\ 339$	$\cdot 0990\ 595^+$	$\cdot 0873\ 619$	$\cdot 0768\ 522$
$\cdot 76$	$\cdot 1474\ 909$	$\cdot 1319\ 477$	$\cdot 1177\ 471$	$\cdot 1048\ 186$
$\cdot 77$	$\cdot 1906\ 158$	$\cdot 1724\ 767$	$\cdot 1556\ 865^+$	$\cdot 1401\ 993$
$\cdot 78$	$\cdot 2417\ 776$	$\cdot 2211\ 860$	$\cdot 2018\ 782$	$\cdot 1838\ 374$
$\cdot 79$	$\cdot 3009\ 017$	$\cdot 2782\ 006$	$\cdot 2566\ 417$	$\cdot 2362\ 394$
$\cdot 80$	$\cdot 3673\ 512$	$\cdot 3430\ 933$	$\cdot 3197\ 644$	$\cdot 2974\ 076$
$\cdot 81$	$\cdot 4398\ 475^+$	$\cdot 4147\ 793$	$\cdot 3903\ 699$	$\cdot 3666\ 851$
$\cdot 82$	$\cdot 5164\ 571$	$\cdot 4914\ 710$	$\cdot 4668\ 412$	$\cdot 4426\ 475^-$
$\cdot 83$	$\cdot 5946\ 676$	$\cdot 5707\ 232$	$\cdot 5468\ 322$	$\cdot 5230\ 781$
$\cdot 84$	$\cdot 6715\ 670$	$\cdot 6495\ 881$	$\cdot 6273\ 940$	$\cdot 6050\ 613$
$\cdot 85$	$\cdot 7441\ 187$	$\cdot 7248\ 821$	$\cdot 7052\ 260$	$\cdot 6852\ 116$
$\cdot 86$	$\cdot 8095\ 070$	$\cdot 7935\ 419$	$\cdot 7770\ 367$	$\cdot 7600\ 328$
$\cdot 87$	$\cdot 8654\ 969$	$\cdot 8530\ 177$	$\cdot 8399\ 662$	$\cdot 8263\ 641$
$\cdot 88$	$\cdot 9107\ 398$	$\cdot 9016\ 301$	$\cdot 8919\ 932$	$\cdot 8818\ 343$
$\cdot 89$	$\cdot 9449\ 499$	$\cdot 9388\ 057$	$\cdot 9322\ 321$	$\cdot 9252\ 237$
$\cdot 90$	$\cdot 9688\ 968$	$\cdot 9651\ 206$	$\cdot 9610\ 350^+$	$\cdot 9566\ 303$
$\cdot 91$	$\cdot 9841\ 996$	$\cdot 9821\ 230$	$\cdot 9798\ 514$	$\cdot 9773\ 751$
$\cdot 92$	$\cdot 9929\ 628$	$\cdot 9919\ 661$	$\cdot 9908\ 637$	$\cdot 9896\ 488$
$\cdot 93$	$\cdot 9973\ 471$	$\cdot 9969\ 438$	$\cdot 9964\ 929$	$\cdot 9959\ 906$
$\cdot 94$	$\cdot 9991\ 959$	$\cdot 9990\ 651$	$\cdot 9989\ 174$	$\cdot 9987\ 511$
$\cdot 95$	$\cdot 9998\ 190$	$\cdot 9997\ 876$	$\cdot 9997\ 518$	$\cdot 9997\ 111$
$\cdot 96$	$\cdot 9999\ 735^+$	$\cdot 9999\ 686$	$\cdot 9999\ 630$	$\cdot 9999\ 565^+$
$\cdot 97$	$\cdot 9999\ 980$	$\cdot 9999\ 977$	$\cdot 9999\ 972$	$\cdot 9999\ 967$
$\cdot 98$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$\cdot 9999\ 999$	$\cdot 9999\ 999$
$\cdot 99$			$1\cdot 0000\ 000$	$1\cdot 0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION

to 70

$q = 11$

$p = 11$

$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$
$\gamma = .2577\ 4020 \times \frac{1}{10^5}$	$.1288\ 7010 \times \frac{1}{10^5}$	$.6723\ 6573 \times \frac{1}{10^7}$	$.3641\ 9810 \times \frac{1}{10^7}$	$.2039\ 5094 \times \frac{1}{10^7}$	$.1176\ 6400 \times \frac{1}{10^7}$
.0000 001					
.0000 005 ⁻	.0000 001				
.0000 014	.0000 002				
.0000 035 ⁻	.0000 007	.0000 001			
.0000 032	.0000 018	.0000 004	.0000 001		
.0000 179	.0000 042	.0000 010	.0000 002		
.0000 364	.0000 092	.0000 023	.0000 005 ⁺	.0000 001	
.0000 701	.0000 190	.0000 050 ⁻	.0000 013	.0000 003	.0000 001
.0001 283	.0000 371	.0000 104	.0000 028	.0000 007	.0000 002
.0002 247	.0000 690	.0000 205 ⁺	.0000 059	.0000 017	.0000 005 ⁻
.0003 784	.0001 229	.0000 386	.0000 118	.0000 035 ⁻	.0000 010
.0006 154	.0002 108	.0000 699	.0000 225 ⁻	.0000 070	.0000 022
.0009 697	.0003 492	.0001 217	.0000 412	.0000 136	.0000 044
.0014 848	.0005 607	.0002 049	.0000 727	.0000 251	.0000 085 ⁻
.0022 152	.0008 752	.0003 347	.0001 243	.0000 450 ⁻	.0000 159
.0032 270	.0013 310	.0005 315 ⁺	.0002 062	.0000 779	.0000 288
.0045 989	.0019 765 ⁻	.0008 226	.0003 327	.0001 311	.0000 505 ⁻
.0064 227	.0028 710	.0012 431	.0005 231	.0002 145 ⁺	.0000 859
.0088 032	.0040 861	.0018 376	.0008 032	.0003 422	.0001 425 ⁻
.0118 575 ⁺	.0057 061	.0026 611	.0012 066	.0005 333	.0002 303
.0157 139	.0078 285 ⁺	.0037 807	.0017 755 ⁻	.0008 130	.0003 638
.0205 098	.0105 639	.0052 760	.0025 629	.0012 141	.0005 621
.0263 899	.0140 351	.0072 399	.0036 333	.0017 784	.0008 510
.0335 028	.0183 761	.0097 791	.0050 640	.0025 582	.0012 636
.0419 973	.0237 301	.0130 133	.0069 460	.0036 176	.0018 425 ⁻
.0520 190	.0302 468	.0170 747	.0093 842	.0050 335 ⁺	.0026 407
.0637 053	.0380 795 ⁺	.0221 062	.0124 976	.0068 971	.0037 235 ⁺
.0771 815 ⁺	.0473 812	.0282 594	.0164 185 ⁺	.0093 140	.0051 697
.0925 560	.0583 004	.0356 916	.0212 916	.0124 047	.0070 726
.1099 160	.0709 765 ⁻	.0445 625 ⁺	.0272 716	.0163 042	.0095 409
.1293 231	.0855 353	.0550 298	.0345 207	.0211 605 ⁻	.0126 990
.1508 102	.1020 838	.0672 445 ⁻	.0432 053	.0271 334	.0166 867
.1743 779	.1207 057	.0813 462	.0534 917	.0343 915 ⁺	.0216 581
.1999 925 ⁺	.1414 570	.0974 578	.0655 414	.0431 088	.0277 798
.2275 849	.1643 618	.1156 801	.0795 058	.0534 604	.0352 285 ⁺
.2570 493	.1894 097	.1360 870	.0955 208	.0656 177	.0441 872
.2882 449	.2165 526	.1587 207	.1137 009	.0797 430	.0548 406
.3209 966	.2457 040	.1835 876	.1341 334	.0959 830	.0673 702
.3550 980	.2767 383	.2106 550 ⁺	.1568 733	.1144 627	.0819 478
.3903 150 ⁺	.3094 918	.2398 491	.1819 386	.1352 792	.0987 294
.4263 902	.3437 644	.2710 538	.2093 056	.1584 957	.1178 478
.4630 479	.3793 231	.3041 104	.2389 067	.1841 356	.1394 059
.5000 000 [*]	.4159 060	.3388 197	.2706 281	.2121 781	.1634 698
.5369 521	.4532 273	.3749 447	.3043 006	.2425 544	.1900 625 ⁻

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.95$ $q = 11$

	$p = 11$	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .25774020 \times \frac{1}{10^8}$		$.12887010 \times \frac{1}{10^8}$	$.67236573 \times \frac{1}{10^7}$	$.36419810 \times \frac{1}{10^7}$	$.2035$
x					
.71	.9794 902	.9695 443	.9565 980	.9403 355 ⁻	.9209
.72	.9842 861	.9764 008	.9659 921	.9527 331	.9361
.73	.9881 425 ⁻	.9819 910	.9737 583	.9631 254	.9491
.74	.9911 968	.9864 796	.9800 800	.9717 014	.9610
.75	.9935 773	.9900 256	.9851 419	.9786 618	.9703
.76	.9954 011	.9927 787	.9891 249	.9842 118	.9778
.77	.9967 730	.9948 771	.9922 006	.9885 544	.9837
.78	.9977 848	.9964 448	.9945 285 ⁺	.9918 841	.9883
.79	.9985 152	.9975 910	.9962 526	.9943 818	.9918
.80	.9990 303	.9984 098	.9974 997	.9962 116	.9944
.81	.9993 846	.9989 800	.9983 791	.9975 180	.9963
.82	.9996 216	.9993 661	.9989 820	.9984 248	.9976
.83	.9997 753	.9996 196	.9993 827	.9990 349	.9985
.84	.9998 717	.9997 805 ⁺	.9996 402	.9994 315 ⁺	.9991
.85	.9999 299	.9998 789	.9997 993	.9996 796	.9995
.86	.9999 636	.9999 364	.9998 935 ⁺	.9998 283	.9997
.87	.9999 821	.9999 685 ⁻	.9999 467	.9999 131	.9998
.88	.9999 918	.9999 854	.9999 750 ⁺	.9999 589	.9999
.89	.9999 965 ⁺	.9999 937	.9999 892	.9999 820	.9999
.90	.9999 986	.9999 975 ⁺	.9999 957	.9999 928	.9999
.91	.9999 995 ⁺	.9999 991	.9999 985 ⁻	.9999 974	.9999
.92	.9999 999	.9999 997	.9999 995 ⁺	.9999 992	.9999
.93	1.0000 000	.9999 999	.9999 999	.9999 998	.9999
.94		1.0000 000	1.0000 000	1.0000 000	.9999
.95					1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

17 to $\cdot 80$ $q = 11$ $p = 1$

	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$g = \cdot 6972\ 6816 \times \frac{1}{10^8}$	$\cdot 4233\ 4138 \times \frac{1}{10^8}$	$\cdot 2627\ 6362 \times \frac{1}{10^8}$	$\cdot 1664\ 1696 \times \frac{1}{10^8}$	$\cdot 1073\ 6578 \times \frac{1}{10^8}$	$\cdot 7045\ 8793$	
17	$\cdot 0000\ 001$					
18	$\cdot 0000\ 003$	$\cdot 0000\ 001$				
19	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
20	$\cdot 0000\ 014$	$\cdot 0000\ 004$	$\cdot 0000\ 001$			
21	$\cdot 0000\ 028$	$\cdot 0000\ 009$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
22	$\cdot 0000\ 055^-$	$\cdot 0000\ 019$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
23	$\cdot 0000\ 104$	$\cdot 0000\ 037$	$\cdot 0000\ 013$	$\cdot 0000\ 004$	$\cdot 0000\ 001$	
24	$\cdot 0000\ 190$	$\cdot 0000\ 070$	$\cdot 0000\ 025^+$	$\cdot 0000\ 009$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
25	$\cdot 0000\ 337$	$\cdot 0000\ 130$	$\cdot 0000\ 049$	$\cdot 0000\ 018$	$\cdot 0000\ 007$	$\cdot 0000\ 002$
26	$\cdot 0000\ 581$	$\cdot 0000\ 232$	$\cdot 0000\ 091$	$\cdot 0000\ 035^+$	$\cdot 0000\ 013$	$\cdot 0000\ 005^+$
27	$\cdot 0000\ 974$	$\cdot 0000\ 404$	$\cdot 0000\ 165^-$	$\cdot 0000\ 066$	$\cdot 0000\ 026$	$\cdot 0000\ 010$
28	$\cdot 0001\ 594$	$\cdot 0000\ 685^+$	$\cdot 0000\ 289$	$\cdot 0000\ 120$	$\cdot 0000\ 049$	$\cdot 0000\ 020$
29	$\cdot 0002\ 549$	$\cdot 0001\ 134$	$\cdot 0000\ 496$	$\cdot 0000\ 213$	$\cdot 0000\ 090$	$\cdot 0000\ 038$
30	$\cdot 0003\ 989$	$\cdot 0001\ 834$	$\cdot 0000\ 829$	$\cdot 0000\ 369$	$\cdot 0000\ 162$	$\cdot 0000\ 070$
31	$\cdot 0006\ 114$	$\cdot 0002\ 903$	$\cdot 0001\ 355^-$	$\cdot 0000\ 622$	$\cdot 0000\ 282$	$\cdot 0000\ 126$
32	$\cdot 0009\ 194$	$\cdot 0004\ 503$	$\cdot 0002\ 167$	$\cdot 0001\ 027$	$\cdot 0000\ 479$	$\cdot 0000\ 221$
33	$\cdot 0013\ 575^+$	$\cdot 0006\ 850^+$	$\cdot 0003\ 398$	$\cdot 0001\ 659$	$\cdot 0000\ 798$	$\cdot 0000\ 379$
34	$\cdot 0019\ 701$	$\cdot 0010\ 233$	$\cdot 0005\ 225^+$	$\cdot 0002\ 626$	$\cdot 0001\ 301$	$\cdot 0000\ 636$
35	$\cdot 0028\ 126$	$\cdot 0015\ 024$	$\cdot 0007\ 890$	$\cdot 0004\ 079$	$\cdot 0002\ 079$	$\cdot 0001\ 045^+$
36	$\cdot 0039\ 533$	$\cdot 0021\ 698$	$\cdot 0011\ 710$	$\cdot 0006\ 223$	$\cdot 0003\ 259$	$\cdot 0001\ 684$
37	$\cdot 0054\ 745^+$	$\cdot 0030\ 849$	$\cdot 0017\ 096$	$\cdot 0009\ 328$	$\cdot 0005\ 018$	$\cdot 0002\ 663$
38	$\cdot 0074\ 741$	$\cdot 0043\ 207$	$\cdot 0024\ 566$	$\cdot 0013\ 755^+$	$\cdot 0007\ 593$	$\cdot 0004\ 136$
39	$\cdot 0100\ 661$	$\cdot 0059\ 652$	$\cdot 0034\ 773$	$\cdot 0019\ 964$	$\cdot 0011\ 300$	$\cdot 0006\ 313$
40	$\cdot 0133\ 813$	$\cdot 0081\ 231$	$\cdot 0048\ 514$	$\cdot 0028\ 539$	$\cdot 0016\ 554$	$\cdot 0009\ 477$
41	$\cdot 0175\ 669$	$\cdot 0109\ 164$	$\cdot 0066\ 750^-$	$\cdot 0040\ 207$	$\cdot 0023\ 883$	$\cdot 0014\ 003$
42	$\cdot 0227\ 853$	$\cdot 0144\ 849$	$\cdot 0090\ 620$	$\cdot 0055\ 857$	$\cdot 0033\ 956$	$\cdot 0020\ 377$
43	$\cdot 0292\ 126$	$\cdot 0189\ 858$	$\cdot 0121\ 453$	$\cdot 0076\ 557$	$\cdot 0047\ 599$	$\cdot 0029\ 218$
44	$\cdot 0370\ 354$	$\cdot 0245\ 927$	$\cdot 0160\ 763$	$\cdot 0103\ 569$	$\cdot 0065\ 821$	$\cdot 0041\ 303$
45	$\cdot 0464\ 471$	$\cdot 0314\ 932$	$\cdot 0210\ 255^-$	$\cdot 0138\ 358$	$\cdot 0089\ 828$	$\cdot 0057\ 590$
46	$\cdot 0576\ 429$	$\cdot 0398\ 861$	$\cdot 0271\ 801$	$\cdot 0182\ 591$	$\cdot 0121\ 037$	$\cdot 0079\ 238$
47	$\cdot 0708\ 144$	$\cdot 0499\ 768$	$\cdot 0347\ 421$	$\cdot 0238\ 132$	$\cdot 0161\ 084$	$\cdot 0107\ 627$
48	$\cdot 0861\ 424$	$\cdot 0619\ 717$	$\cdot 0439\ 243$	$\cdot 0307\ 021$	$\cdot 0211\ 822$	$\cdot 0144\ 366$
49	$\cdot 1037\ 899$	$\cdot 0760\ 722$	$\cdot 0549\ 452$	$\cdot 0391\ 444$	$\cdot 0275\ 308$	$\cdot 0191\ 303$
50	$\cdot 1238\ 943$	$\cdot 0924\ 667$	$\cdot 0680\ 230$	$\cdot 0493\ 686$	$\cdot 0353\ 778$	$\cdot 0250\ 512$
51	$\cdot 1465\ 598$	$\cdot 1113\ 226$	$\cdot 0833\ 678$	$\cdot 0616\ 071$	$\cdot 0449\ 603$	$\cdot 0324\ 275^+$
52	$\cdot 1718\ 495^+$	$\cdot 1327\ 779$	$\cdot 1011\ 733$	$\cdot 0760\ 892$	$\cdot 0565\ 236$	$\cdot 0415\ 047$
53	$\cdot 1997\ 789$	$\cdot 1569\ 322$	$\cdot 1216\ 074$	$\cdot 0930\ 316$	$\cdot 0703\ 138$	$\cdot 0525\ 398$
54	$\cdot 2303\ 093$	$\cdot 1838\ 384$	$\cdot 1448\ 028$	$\cdot 1126\ 293$	$\cdot 0865\ 687$	$\cdot 0657\ 947$
55	$\cdot 2633\ 441$	$\cdot 2134\ 953$	$\cdot 1708\ 469$	$\cdot 1350\ 447$	$\cdot 1055\ 079$	$\cdot 0815\ 268$
56	$\cdot 2987\ 256$	$\cdot 2458\ 412$	$\cdot 1997\ 731$	$\cdot 1603\ 970$	$\cdot 1273\ 210$	$\cdot 0999\ 782$
57	$\cdot 3362\ 344$	$\cdot 2807\ 492$	$\cdot 2315\ 524$	$\cdot 1887\ 511$	$\cdot 1521\ 561$	$\cdot 1213\ 639$
58	$\cdot 3755\ 912$	$\cdot 3180\ 248$	$\cdot 2660\ 871$	$\cdot 2201\ 085^+$	$\cdot 1801\ 072$	$\cdot 1458\ 584$
59	$\cdot 4164\ 612$	$\cdot 3574\ 061$	$\cdot 3032\ 065^+$	$\cdot 2543\ 985^-$	$\cdot 2112\ 033$	$\cdot 1735\ 824$
60	$\cdot 4584\ 602$	$\cdot 3985\ 663$	$\cdot 3426\ 654$	$\cdot 2914\ 719$	$\cdot 2453\ 077$	$\cdot 2045\ 802$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.96$ $q = 11$

	$p = 17$	$p = 18$	$p = 19$	$p = 20$	$p = 21$
$B(p, q) = .6972\ 6816 \times \frac{1}{10^8}$		$.4233\ 4138 \times \frac{1}{10^8}$	$.2627\ 6362 \times \frac{1}{10^8}$	$.1664\ 1696 \times \frac{1}{10^8}$	$.1073\ 6578$
x					
.81	.9925 835 ⁺	.9898 502	.9864 063	.9821 485 ⁻	.9769 752
.82	.9951 445 ⁺	.9932 868	.9909 171	.9879 513	.9843 034
.83	.9969 318	.9957 144	.9941 427	.9921 515 ⁺	.9896 725 ⁺
.84	.9981 363	.9973 703	.9963 694	.9950 862	.9934 693
.85	.9989 172	.9984 566	.9978 477	.9970 576	.9960 503
.86	.9994 018	.9991 387	.9987 868	.9983 249	.9977 291
.87	.9996 880	.9995 463	.9993 546	.9990 999	.9987 676
.88	.9998 478	.9997 764	.9996 788	.9995 476	.9993 745 ⁻
.89	.9999 313	.9998 981	.9998 522	.9997 897	.9997 064
.90	.9999 717	.9999 577	.9999 380	.9999 109	.9998 744
.91	.9999 896	.9999 843	.9999 767	.9999 663	.9999 520
.92	.9999 967	.9999 949	.9999 924	.9999 889	.9999 840
.93	.9999 991	.9999 986	.9999 979	.9999 969	.9999 955 ⁺
.94	.9999 998	.9999 997	.9999 995 ⁺	.9999 993	.9999 990
.95	1.0000 000	1.0000 000	.9999 999	.9999 999	.9999 998
.96			1.0000 000	1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

5 to 80

$q = 11$

$p = 23$

	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$
$q) = .4697\ 2528 \times \frac{1}{10^9}$	$.3177\ 5534 \times \frac{1}{10^9}$	$.2178\ 8938 \times \frac{1}{10^9}$	$.1513\ 1207 \times \frac{1}{10^9}$	$.1063\ 2740 \times \frac{1}{10^9}$	$.7554\ 8414$	
5	.0000 001					
6	.0000 002	.0000 001				
7	.0000 004	.0000 001	.0000 001			
8	.0000 008	.0000 003	.0000 001			
9	.0000 016	.0000 006	.0000 003	.0000 001		
0	.0000 030	.0000 013	.0000 005 ⁺	.0000 002	.0000 001	
1	.0000 055 ⁺	.0000 024	.0000 010	.0000 004	.0000 002	
2	.0000 100	.0000 045 ⁺	.0000 020	.0000 009	.0000 004	
3	.0000 177	.0000 082	.0000 038	.0000 017	.0000 008	
4	.0000 307	.0000 146	.0000 069	.0000 032	.0000 015 ⁻	
5	.0000 519	.0000 255 ⁻	.0000 124	.0000 059	.0000 028	
6	.0000 860	.0000 434	.0000 216	.0000 107	.0000 052	
7	.0001 396	.0000 723	.0000 371	.0000 188	.0000 095 ⁻	
8	.0002 225 ⁺	.0001 183	.0000 623	.0000 324	.0000 167	
9	.0003 483	.0001 900	.0001 025 ⁺	.0000 548	.0000 290	
0	.0005 360	.0002 997	.0001 658	.0000 908	.0000 492	
1	.0008 111	.0004 645 ⁺	.0002 632	.0001 476	.0000 820	
2	.0012 082	.0007 083	.0004 108	.0002 359	.0001 342	
3	.0017 721	.0010 628	.0006 307	.0003 706	.0002 158	
4	.0025 611	.0015 705 ⁺	.0009 530	.0005 727	.0003 409	
5	.0036 489	.0022 865 ⁻	.0014 180	.0008 708	.0005 298	
6	.0051 271	.0032 813	.0020 785 ⁻	.0013 038	.0008 104	
7	.0071 082	.0046 438	.0030 029	.0019 232	.0012 205 ⁺	
8	.0097 270	.0064 835 ⁺	.0042 779	.0027 958	.0018 107	
9	.0131 431	.0089 338	.0060 118	.0040 074	.0026 474	
0	.0175 410	.0121 533	.0083 369	.0056 655 ⁻	.0038 160	
1	.0231 305 ⁺	.0163 276	.0114 124	.0079 030	.0054 248	
2	.0301 449	.0216 695 ⁺	.0154 260	.0108 807	.0076 081	
3	.0388 377	.0284 181	.0205 948	.0147 898	.0105 299	
4	.0494 777	.0368 355 ⁺	.0271 643	.0198 528	.0143 861	
5	.0623 419	.0472 025 ⁺	.0354 065 ⁻	.0263 235 ⁻	.0194 064	
6	.0777 063	.0598 112	.0456 145 ⁺	.0344 843	.0258 541	
7	.0958 344	.0749 558	.0580 962	.0446 423	.0340 241	
8	.1169 649	.0929 205 ⁺	.0731 640	.0571 218	.0442 386	
9	.1412 968	.1139 663	.0911 226	.0722 537	.0568 393	
0	.1689 745 ⁻	.1383 148	.1122 541	.0903 632	.0721 768	
1	.2000 731	.1661 321	.1368 013	.1117 529	.0905 966	
2	.2345 845 ⁻	.1975 116	.1649 492	.1366 850 ⁺	.1124 214	
3	.2724 052	.2324 586	.1968 063	.1653 609	.1379 309	
4	.3133 282	.2708 765 ⁻	.2323 869	.1979 003	.1673 398	
5	.3570 379	.3125 559	.2715 955 ⁻	.2343 214	.2007 748	
6	.4031 112	.3571 695 ⁺	.3142 140	.2745 232	.2382 519	
7	.4510 236	.4042 714	.3598 958	.3182 714	.2796 568	
8	.5001 619	.4533 040	.4081 642	.3651 911	.3247 303	
9	.5498 425 ⁺	.5036 112	.4584 202	.4147 656	.3730 587	
1					.0929 115 ⁺	
2					.0918 062	
3					.1142 496	
4					.1405 372	
5					.1708 935 ⁻	
6					.2054 464	
7					.2442 029	
8					.2870 268	
9					.3336 225 ⁻	

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.97$ $q = 11$

	$p = 23$	$p = 24$	$p = 25$	$p = 26$	$p =$
$B(p, q) =$	$.4697\ 2528 \times \frac{1}{10^8}$	$.3177\ 5534 \times \frac{1}{10^8}$	$.2178\ 8938 \times \frac{1}{10^8}$	$.1513\ 1207 \times \frac{1}{10^8}$	$.1063$
x					
.81	.9635 016	.9550 318	.9453 127	.9342 913	.9219
.82	.9746 209	.9684 244	.9612 262	.9529 626	.9435
.83	.9829 683	.9786 015 ⁺	.9734 669	.9675 005 ⁻	.9606
.84	.9890 147	.9860 623	.9825 490	.9784 173	.9736
.85	.9932 238	.9913 180	.9890 232	.9862 923	.9830
.86	.9960 263	.9948 587	.9934 361	.9917 234	.9896
.87	.9978 008	.9971 267	.9962 958	.9952 838	.9940
.88	.9988 616	.9984 981	.9980 449	.9974 866	.9968
.89	.9994 551	.9992 741	.9990 459	.9987 615 ⁻	.9984
.90	.9997 623	.9996 803	.9995 757	.9994 439	.9992
.91	.9999 073	.9998 741	.9998 314	.9997 768	.9997
.92	.9999 685 ⁺	.9999 569	.9999 416	.9999 220	.9998
.93	.9999 910	.9999 876	.9999 830	.9999 771	.9999
.94	.9999 980	.9999 972	.9999 961	.9999 947	.9999
.95	.9999 997	.9999 995 ⁺	.9999 993	.9999 991	.9999
.96	1.0000 000	.9999 999	.9999 999	.9999 999	.9999
.97		1.0000 000	1.0000 000	1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

to .98

$q = 11$

$p = 29$

$p = 29$	$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$
$= .5423\ 9887 \times \frac{1}{10^{10}}$	$.3932\ 3918 \times \frac{1}{10^{10}}$	$.2877\ 3599 \times \frac{1}{10^{10}}$	$.2123\ 7656 \times \frac{1}{10^{10}}$	$.1580\ 4767 \times \frac{1}{10^{10}}$	$.1185\ 3576 \times \frac{1}{10^{10}}$
.0000 001					
.0000 002	.0000 001				
.0000 003	.0000 001	.0000 001			
.0000 006	.0000 003	.0000 001	.0000 001		
.0000 012	.0000 006	.0000 003	.0000 001	.0000 001	
.0000 023	.0000 011	.0000 006	.0000 003	.0000 001	.0000 001
.0000 043	.0000 022	.0000 011	.0000 005 ⁺	.0000 003	.0000 001
.0000 079	.0000 041	.0000 021	.0000 011	.0000 005 ⁺	.0000 003
.0000 141	.0000 075 ⁻	.0000 039	.0000 020	.0000 011	.0000 005 ⁺
.0000 247	.0000 134	.0000 072	.0000 038	.0000 020	.0000 011
.0000 423	.0000 235 ⁻	.0000 129	.0000 071	.0000 038	.0000 021
.0000 713	.0000 404	.0000 228	.0000 128	.0000 071	.0000 039
.0001 178	.0000 684	.0000 394	.0000 226	.0000 128	.0000 072
.0001 912	.0001 135 ⁺	.0000 669	.0000 391	.0000 228	.0000 131
.0003 052	.0001 851	.0001 115 ⁻	.0000 666	.0000 396	.0000 234
.0004 793	.0002 969	.0001 825 ⁺	.0001 114	.0000 676	.0000 407
.0007 407	.0004 682	.0002 938	.0001 831	.0001 134	.0000 698
.0011 270	.0007 268	.0004 654	.0002 959	.0001 870	.0001 174
.0016 889	.0011 107	.0007 252	.0004 703	.0003 031	.0001 941
.0024 940	.0016 719	.0011 128	.0007 356	.0004 832	.0003 155 ⁻
.0036 303	.0024 795 ⁻	.0016 815 ⁺	.0011 327	.0007 582	.0005 044
.0052 105 ⁻	.0036 243	.0025 034	.0017 176	.0011 711	.0007 936
.0073 761	.0052 231	.0036 730	.0025 659	.0017 812	.0012 291
.0103 016	.0074 233	.0053 125 ⁻	.0037 771	.0026 687	.0018 744
.0141 978	.0104 071	.0075 768	.0054 805 ⁻	.0039 397	.0028 154
.0193 141	.0143 959	.0106 580	.0078 402	.0057 321	.0041 663
.0259 387	.0196 518	.0147 899	.0110 604	.0082 213	.0060 756
.0343 972	.0264 792	.0202 504	.0153 900	.0116 261	.0087 325 ⁺
.0450 474	.0352 225 ⁻	.0273 625 ⁺	.0211 253	.0162 135 ⁻	.0123 733
.0582 708	.0462 604	.0364 919	.0286 109	.0223 012	.0172 859
.0744 601	.0599 970	.0480 408	.0382 367	.0302 587	.0238 134
.0940 021	.0768 476	.0624 379	.0504 313	.0405 033	.0323 533
.1172 572	.0972 203	.0801 222	.0656 494	.0534 923	.0433 540
.1445 338	.1214 919	.1015 222	.0843 547	.0697 087	.0573 040
.1760 622	.1499 811	.1270 298	.1069 955 ⁻	.0896 407	.0747 157
.2119 652	.1829 179	.1569 690	.1339 749	.1137 545 ⁻	.0961 014
.2522 319	.2204 125 ⁻	.1915 629	.1656 170	.1424 602	.1219 418
.2966 933	.2624 255 ⁺	.2308 992	.2021 289	.1760 738	.1526 479
.3450 054	.3087 427	.2748 975 ⁺	.2435 634	.2147 752	.1885 169
.3966 409	.3589 572	.3232 833	.2897 844	.2585 676	.2296 873
.4508 918	.4124 624	.3755 701	.3404 392	.3072 404	.2760 940
.5068 864	.4684 584	.4310 552	.3949 429	.3603 429	.3274 310
.5636 192	.5259 740	.4888 307	.4524 782	.4171 708	.3831 260
.6199 952	.5839 041	.5478 130	.5120 130	.4767 723	.4423 326
.6748 850 ⁻	.6410 628	.6067 897	.5723 397	.5379 759	.5039 452
.7271 884	.6962 484	.6644 833	.6321 341	.5994 413	.5666 395 ⁻
.7759 006	.7483 154	.7196 267	.6900 312	.6597 328	.6289 385 ⁺

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .38 \text{ to } .98$ $q = 11$

	$p = 35$	$p = 36$	$p = 37$	$p = 38$	p
$B(p, q) = .8956\ 0349 \times \frac{1}{10^{11}}$		$.6814\ 3744 \times \frac{1}{10^{11}}$	$.5219\ 5208 \times \frac{1}{10^{11}}$	$.4023\ 3806 \times \frac{1}{10^{11}}$	$.31$
$\cdot 38$	•0000 001				
$\cdot 39$	•0000 001	•0000 001			
$\cdot 40$	•0000 003	•0000 001	•0000 001		
$\cdot 41$	•0000 006	•0000 003		•0000 001	
$\cdot 42$	•0000 011	•0000 006	•0000 003	•0000 002	•000
$\cdot 43$	•0000 021	•0000 012	•0000 006	•0000 003	•000
$\cdot 44$	•0000 041	•0000 023	•0000 013	•0000 007	•000
$\cdot 45$	•0000 075 ⁺	•0000 043	•0000 024	•0000 014	•000
$\cdot 46$	•0000 137	•0000 080	•0000 046	•0000 027	•000
$\cdot 47$	•0000 244	•0000 145 ⁺	•0000 086	•0000 051	•000
$\cdot 48$	•0000 427	•0000 260	•0000 157	•0000 095 ⁻	•000
$\cdot 49$	•0000 733	•0000 455 ⁻	•0000 281	•0000 172	•000
$\cdot 50$	•0001 235 ⁺	•0000 782	•0000 492	•0000 308	•000
$\cdot 51$	•0002 047	•0001 321	•0000 848	•0000 542	•000
$\cdot 52$	•0003 336	•0002 194	•0001 436	•0000 935 ⁻	•000
$\cdot 53$	•0005 347	•0003 583	•0002 388	•0001 584	•000
$\cdot 54$	•0008 433	•0005 754	•0003 905 ⁺	•0002 638	•000
$\cdot 55$	•0013 090	•0009 092	•0006 282	•0004 319	•000
$\cdot 56$	•0020 006	•0014 140	•0009 942	•0006 956	•000
$\cdot 57$	•0030 113	•0021 649	•0015 484	•0011 021	•000
$\cdot 58$	•0044 651	•0032 641	•0023 740	•0017 183	•001
$\cdot 59$	•0065 232	•0048 473	•0035 838	•0026 369	•001
$\cdot 60$	•0093 915 ⁺	•0070 913	•0053 278	•0039 837	•002
$\cdot 61$	•0133 268	•0102 218	•0078 015 ⁺	•0059 262	•004
$\cdot 62$	•0186 420	•0145 196	•0112 538	•0086 817	•006
$\cdot 63$	•0257 087	•0203 266	•0159 940	•0125 267	•009
$\cdot 64$	•0349 571	•0280 477	•0223 973	•0178 037	•014
$\cdot 65$	•0468 694	•0381 491	•0309 064	•0249 263	•020
$\cdot 66$	•0619 679	•0511 506	•0420 279	•0343 797	•028
$\cdot 67$	•0807 952	•0676 099	•0563 219	•0407 149	•038
$\cdot 68$	•1038 857	•0880 995 ⁺	•0743 830	•0625 350 ⁻	•052
$\cdot 69$	•1317 299	•1131 727	•0968 114	•0824 709	•069
$\cdot 70$	•1647 300	•1433 217	•1241 732	•1071 466	•092
$\cdot 71$	•2031 514	•1789 279	•1569 519	•1371 318	•119
$\cdot 72$	•2470 728	•2202 075 ⁻	•1954 914	•1728 862	•152
$\cdot 73$	•2963 388	•2671 567	•2399 362	•2146 947	•191
$\cdot 74$	•3505 230	•3195 036	•2901 731	•2626 023	•236
$\cdot 75$	•4089 058	•3766 728	•3457 829	•3163 539	•288
$\cdot 76$	•4704 751	•4377 700	•4060 097	•3753 481	•345
$\cdot 77$	•5339 534	•5015 942	•4697 563	•4386 155 ⁻	•408
$\cdot 78$	•5978 545 ⁻	•5666 816	•5356 126	•5048 292	•474
$\cdot 79$	•6605 685 ⁻	•6313 823	•6019 206	•5723 553	•542
$\cdot 80$	•7204 707	•6939 677	•6668 757	•6393 443	•611
$\cdot 81$	•7760 442	•7527 580	•7286 580	•7028 611	•681

$x = .43$ to $.98$ $q = 11$ $p = 41$ to

	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$B(p, q) = .1908\ 8115 \times \frac{1}{10^{11}}$		$.1505\ 0245 \times \frac{1}{10^{11}}$	$.1192\ 6609 \times \frac{1}{10^{11}}$	$.9497\ 1147 \times \frac{1}{10^{11}}$	$.7597\ 6917 \times \frac{1}{10^{11}}$
x					
.43	.0000 001				
.44	.0000 001	.0000 001			
.45	.0000 002	.0000 001	.0000 001		
.46	.0000 005 ⁻	.0000 003	.0000 002	.0000 001	.0000 001
.47	.0000 010	.0000 006	.0000 003	.0000 002	.0000 001
.48	.0000 020	.0000 012	.0000 007	.0000 004	.0000 002
.49	.0000 039	.0000 023	.0000 014	.0000 008	.0000 005 ⁺
.50	.0000 074	.0000 045 ⁺	.0000 028	.0000 017	.0000 010
.51	.0000 137	.0000 086	.0000 054	.0000 033	.0000 021
.52	.0000 251	.0000 160	.0000 102	.0000 065 ⁻	.0000 041
.53	.0000 449	.0000 292	.0000 190	.0000 123	.0000 079
.54	.0000 790	.0000 524	.0000 346	.0000 228	.0000 149
.55	.0001 365 ⁻	.0000 922	.0000 620	.0000 415 ⁺	.0000 277
.56	.0002 317	.0001 592	.0001 090	.0000 743	.0000 505 ⁻
.57	.0003 865 ⁺	.0002 703	.0001 882	.0001 306	.0000 902
.58	.0006 339	.0004 508	.0003 193	.0002 253	.0001 584
.59	.0010 222	.0007 391	.0005 322	.0003 818	.0002 729
.60	.0016 212	.0011 914	.0008 720	.0006 359	.0004 620
.61	.0025 293	.0018 885 ⁺	.0014 046	.0010 408	.0007 684
.62	.0038 823	.0029 444	.0022 245 ⁻	.0016 744	.0012 557
.63	.0058 636	.0045 157	.0043 644	.0026 481	.0020 169
.64	.0087 152	.0068 134	.0053 065 ⁻	.0041 177	.0031 840
.65	.0127 485 ⁻	.0101 143	.0079 944	.0062 960	.0049 411
.66	.0183 540	.0147 729	.0118 466	.0094 661	.0075 378
.67	.0260 080	.0212 308	.0172 680	.0139 954	.0113 045 ⁺
.68	.0362 730	.0300 217	.0247 587	.0203 476	.0166 663
.69	.0497 909	.0417 697	.0349 172	.0290 894	.0241 543
.70	.0672 649	.0571 769	.0484 339	.0408 906	.0344 102
.71	.0894 270	.0769 984	.0660 730	.0565 121	.0481 810
.72	.1169 915 ⁻	.1020 007	.0886 375 ⁺	.0767 785 ⁻	.0662 994
.73	.1505 920	.1329 035 ⁺	.1169 165 ⁻	.1025 318	.0896 445 ⁻
.74	.1907 065 ⁺	.1703 051	.1516 135 ⁻	.1345 650 ⁺	.1190 819
.75	.2375 727	.2145 951	.1932 587	.1735 350 ⁺	.1553 802
.76	.2911 049	.2658 623	.2421 102	.2198 606	.1991 078
.77	.3508 212	.3238 078	.2980 550 ⁺	.2736 139	.2505 170
.78	.4157 960	.3876 782	.3605 245 ⁻	.3344 190	.3094 289
.79	.4846 509	.4562 340	.4284 397	.4013 757	.3751 359
.80	.5555 956	.5277 682	.5002 059	.4730 281	.4463 444
.81	.6265 265 ⁺	.6001 858	.5737 697	.5473 967	.5211 795 ⁺
.82	.6951 806	.6711 470	.6467 472	.6220 863	.5972 686
.83	.7593 331	.7382 666	.7166 182	.6944 715 ⁻	.6719 119
.84	.8170 177	.7993 482	.7809 719	.7619 461	.7423 322
.85	.8667 343	.8526 209	.8377 682	.8222 074	.8059 746
.86	.9076 126	.8969 393	.8855 748	.8735 284	.8608 140
.87	.9394 024	.9310 056	.9222 222	.9140 682	.9056 101
.88	.9625 111	.9555 111	.9484 111	.9412 111	.9339 111
.89	.9770 111	.9700 111	.9628 111	.9556 111	.9484 111
.90	.9825 111	.9755 111	.9683 111	.9611 111	.9539 111
.91	.9875 111	.9805 111	.9733 111	.9661 111	.9589 111
.92	.9915 111	.9845 111	.9773 111	.9701 111	.9629 111
.93	.9945 111	.9875 111	.9803 111	.9731 111	.9659 111
.94	.9965 111	.9895 111	.9823 111	.9751 111	.9679 111
.95	.9975 111	.9905 111	.9833 111	.9761 111	.9699 111
.96	.9980 111	.9910 111	.9838 111	.9766 111	.9704 111
.97	.9982 111	.9912 111	.9840 111	.9768 111	.9706 111
.98	.9983 111	.9913 111	.9841 111	.9769 111	.9707 111

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .47$ to $.98$ $q = 11$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$	$p = 50$
$B(p, q) = .6105\ 2880 \times \frac{x}{10^{12}}$		$.4927\ 0745 \times \frac{x}{10^{12}}$	$.3992\ 6294 \times \frac{x}{10^{12}}$	$.3248\ 2408 \times \frac{x}{10^{12}}$	$.2600\ 0000 \times \frac{x}{10^{12}}$
.47	.0000 001				
.48	.0000 001	.0000 001			
.49	.0000 003	.0000 002	.0000 001	.0000 001	
.50	.0000 006	.0000 004	.0000 002	.0000 001	.0000 000
.51	.0000 013	.0000 008	.0000 005-	.0000 003	.0000 001
.52	.0000 026	.0000 016	.0000 010	.0000 006	.0000 003
.53	.0000 051	.0000 032	.0000 021	.0000 013	.0000 007
.54	.0000 097	.0000 063	.0000 041	.0000 027	.0000 013
.55	.0000 184	.0000 122	.0000 081	.0000 053	.0000 027
.56	.0000 342	.0000 230	.0000 155-	.0000 104	.0000 053
.57	.0000 621	.0000 426	.0000 292	.0000 199	.0000 104
.58	.0001 109	.0000 774	.0000 539	.0000 374	.0000 199
.59	.0001 944	.0001 380	.0000 976	.0000 688	.0000 374
.60	.0003 345-	.0002 413	.0001 736	.0001 244	.0000 688
.61	.0005 653	.0004 145+	.0003 029	.0002 207	.0001 244
.62	.0009 385+	.0006 991	.0005 191	.0003 842	.0002 207
.63	.0015 309	.0011 581	.0008 733	.0006 565+	.0003 842
.64	.0024 537	.0018 847	.0014 430	.0011 014	.0006 565+
.65	.0038 648	.0030 130	.0023 416	.0018 143	.0011 014
.66	.0059 824	.0047 326	.0037 323	.0029 345+	.0018 143
.67	.0091 010	.0073 036	.0058 432	.0046 608	.0029 345+
.68	.0136 068	.0110 740	.0089 853	.0072 691	.0046 608
.69	.0199 924	.0164 964	.0135 709	.0111 318	.0072 691
.70	.0288 658	.0241 410	.0201 300	.0167 374	.0111 318
.71	.0409 515-	.0347 027	.0293 220	.0247 059	.0167 374
.72	.0570 778	.0489 948	.0419 369	.0357 964	.0247 059
.73	.0781 461	.0679 276	.0588 809	.0509 010	.0357 964
.74	.1050 783	.0924 629	.0811 412	.0710 177	.0509 010
.75	.1387 383	.1235 435+	.1097 228	.0971 977	.0710 177
.76	.1798 307	.1619 952	.1455 562	.1304 597	.0971 977
.77	.2287 802	.2084 044	.1893 768	.1716 732	.1304 597
.78	.2856 050+	.2629 827	.2415 829	.2214 137	.1716 732
.79	.3498 000	.3254 334	.3020 881	.2798 031	.2214 137
.80	.4202 538	.3948 437	.3701 906	.3463 592	.2798 031
.81	.4952 245-	.4696 306	.4444 887	.4198 810	.3463 592
.82	.5723 956	.5475 660	.5228 737	.4984 077	.4198 810
.83	.6490 266	.6259 024	.6026 257	.5792 811	.4984 077
.84	.7221 953	.7016 030	.6806 253	.6593 328	.5792 811
.85	.7891 106	.7716 600	.7536 710	.7351 948	.6593 328
.86	.8474 498	.8334 580	.8188 648	.8037 001	.7351 948
.87	.8956 595-	.8851 205+	.8740 008	.8623 111	.8037 001
.88	.9331 540	.9257 625+	.9178 741	.9094 860	.8623 111
.89	.9603 562	.9555 831	.9504 313	.9448 909	.9094 860
.90	.9785 586	.9757 616	.9727 087	.9693 887	.9448 909

TABLES OF THE INCOMPLETE β -FUNCTION

to .70

$q = 12$

$p = 12$

$p = 12$	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$
$= .6163\ 3525^{\frac{1}{10^7}}$	$.3081\ 6763 \times \frac{1}{10^7}$	$.1602\ 4717 \times \frac{1}{10^7}$	$.8628\ 6935^{\frac{1}{10^8}}$	$.4793\ 7186 \times \frac{1}{10^8}$	$.2739\ 2678 \times$
.0000 001					
.0000 005 ⁻	.0000 001				
.0000 013	.0000 003	.0000 001			
.0000 033	.0000 007	.0000 002			
.0000 078	.0000 018	.0000 004	.0000 001		
.0000 169	.0000 043	.0000 011	.0000 003	.0000 001	
.0000 344	.0000 094	.0000 025 ⁻	.0000 006	.0000 002	
.0000 603	.0000 193	.0000 055 ⁻	.0000 015 ⁺	.0000 004	.0000 001
.0001 220	.0000 378	.0000 113	.0000 033	.0000 009	.0000 003
.0002 149	.0000 704	.0000 223	.0000 069	.0000 021	.0000 006
.0003 646	.0001 258	.0000 421	.0000 137	.0000 043	.0000 013
.0005 974	.0002 168	.0000 763	.0000 261	.0000 087	.0000 028
.0009 489	.0003 611	.0001 333	.0000 479	.0000 168	.0000 057
.0014 648	.0005 833	.0002 253	.0000 847	.0000 310	.0000 111
.0022 031	.0009 160	.0003 695 ⁻	.0001 450 ⁻	.0000 555 ⁺	.0000 208
.0032 352	.0014 016	.0005 892	.0002 410	.0000 962	.0000 375 ⁺
.0046 468	.0020 940	.0009 158	.0003 898	.0001 619	.0000 658
.0065 390	.0030 599	.0013 900	.0006 147	.0002 652	.0001 119
.0090 279	.0043 801	.0020 634	.0009 464	.0004 237	.0001 855 ⁺
.0122 443	.0061 505 ⁺	.0030 005 ⁻	.0014 255 ⁻	.0006 611	.0002 999
.0163 325 ⁺	.0084 824	.0042 795 ⁺	.0021 030	.0010 090	.0004 736
.0214 480	.0115 023	.0059 940	.0030 431	.0015 086	.0007 318
.0277 547	.0153 515 ⁺	.0082 531	.0043 237	.0022 122 ⁺	.0011 077
.0354 211	.0201 838	.0111 821	.0060 382	.0031 851	.0016 444
.0440 165 ⁻	.0261 635 ⁻	.0149 213	.0082 965 ⁺	.0045 071	.0023 969
.0555 050 ⁺	.0334 618	.0196 254	.0112 247	.0062 739	.0034 334
.0682 414	.0422 531	.0254 606	.0149 653	.0085 982	.0048 376
.0829 644	.0527 098	.0326 022	.0196 758	.0116 098	.0067 096
.0997 917	.0649 973	.0412 301	.0255 268	.0154 557	.0091 675 ⁺
.1188 140	.0792 678	.0515 246	.0326 988	.0202 990	.0123 475 ⁺
.1400 904	.0956 544	.0636 604	.0413 790	.0263 167	.0164 038
.1636 434	.1142 651	.0778 011	.0517 553	.0336 970	.0215 076
.1894 561	.1351 771	.0940 920	.0640 119	.0426 350 ⁻	.0278 448
.2174 692	.1584 315 ⁺	.1126 546	.0783 219	.0533 278	.0356 131
.2475 798	.1840 289	.1335 793	.0948 412	.0659 684	.0450 176
.2796 419	.2119 260	.1569 199	.1137 009	.0807 391	.0562 650 ⁺
.3134 674	.2420 335 ⁻	.1826 884	.1350 004	.0978 038	.0695 576
.3488 293	.2742 152	.2108 506	.1588 011	.1173 003	.0850 853
.3854 657	.3082 889	.2413 232	.1851 199	.1393 329	.1030 181
.4230 852	.3440 288	.2739 728	.2139 247	.1639 647	.1234 971
.4613 734	.3811 693	.3086 154	.2451 307	.1912 110	.1466 262
.5000 000 ⁶	.4194 099	.3450 190	.2785 985 ⁺	.2210 342	.1724 642
.5386 266	.4584 224	.3829 072	.3141 343	.2533 391	.2010 172
.5766 148	.4980 244 ⁻	.4239 611			

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.94$ $q = 12$

	$p = 12$	$p = 13$	$p = 14$	$p = 15$
$B(p, q) = .6163\ 3525 \times \frac{1}{10^7}$		$.3081\ 6763 \times \frac{1}{10^7}$	$.1602\ 4717 \times \frac{1}{10^7}$	$.8628\ 6935 \times \frac{1}{10^8}$
x				
.71	.9836 675 ⁻	.9758 173	.9655 276	.9524 817
.72	.9877 557	.9816 619	.9735 618	.9631 475 ⁻
.73	.9909 721	.9863 244	.9800 607	.9718 955 ⁻
.74	.9934 610	.9899 819	.9852 290	.9789 483
.75	.9953 532	.9928 003	.9892 657	.9845 318
.76	.9967 648	.9949 312	.9923 586	.9888 671
.77	.9977 969	.9965 097	.9946 800	.9921 642
.78	.9985 352	.9976 537	.9963 844	.9946 164
.79	.9990 511	.9984 634	.9976 063	.9963 971
.80	.9994 026	.9990 220	.9984 599	.9976 570
.81	.9996 354	.9993 967	.9990 398	.9985 235 ⁻
.82	.9997 851	.9996 405 ⁺	.9994 217	.9991 012
.83	.9998 780	.9997 938	.9996 648	.9994 736
.84	.9999 337	.9998 867	.9998 139	.9997 046
.85	.9999 656	.9999 407	.9999 015 ⁺	.9998 421
.86	.9999 831	.9999 706	.9999 507	.9999 201
.87	.9999 922	.9999 863	.9999 768	.9999 620
.88	.9999 967	.9999 941	.9999 898	.9999 832
.89	.9999 987	.9999 976	.9999 959	.9999 932
.90	.9999 995 ⁺	.9999 992	.9999 985 ⁺	.9999 975 ⁻
.91	.9999 999	.9999 997	.9999 995 ⁺	.9999 992
.92	1.0000 000	.9999 999	.9999 999	.9999 998
.93		1.0000 000	1.0000 000	.9999 999
.94				1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

$\cdot 17$ to $\cdot 80$ $q = 12$ $p = 1$

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$
$p, q) = \cdot 1605\ 7777 \times \frac{1}{10^8}$	$\cdot 9634\ 6660 \times \frac{1}{10^9}$	$\cdot 5905\ 1179 \times \frac{1}{10^9}$	$\cdot 3690\ 6987 \times \frac{1}{10^9}$	$\cdot 2348\ 6264 \times \frac{1}{10^9}$	$\cdot 1519\ 699$	
$\cdot 17$	$\cdot 0000\ 001$					
$\cdot 18$	$\cdot 0000\ 002$					
$\cdot 19$	$\cdot 0000\ 004$	$\cdot 0000\ 001$				
$\cdot 20$	$\cdot 0000\ 009$	$\cdot 0000\ 003$	$\cdot 0000\ 001$			
$\cdot 21$	$\cdot 0000\ 019$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 22$	$\cdot 0000\ 039$	$\cdot 0000\ 013$	$\cdot 0000\ 005$	$\cdot 0000\ 002$		
$\cdot 23$	$\cdot 0000\ 076$	$\cdot 0000\ 027$	$\cdot 0000\ 010$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 24$	$\cdot 0000\ 143$	$\cdot 0000\ 054$	$\cdot 0000\ 020$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 25$	$\cdot 0000\ 262$	$\cdot 0000\ 102$	$\cdot 0000\ 039$	$\cdot 0000\ 015$	$\cdot 0000\ 006$	$\cdot 0000\ 002$
$\cdot 26$	$\cdot 0000\ 463$	$\cdot 0000\ 188$	$\cdot 0000\ 075$	$\cdot 0000\ 029$	$\cdot 0000\ 011$	$\cdot 0000\ 004$
$\cdot 27$	$\cdot 0000\ 796$	$\cdot 0000\ 335^+$	$\cdot 0000\ 139$	$\cdot 0000\ 056$	$\cdot 0000\ 023$	$\cdot 0000\ 009$
$\cdot 28$	$\cdot 0001\ 333$	$\cdot 0000\ 582$	$\cdot 0000\ 249$	$\cdot 0000\ 105^+$	$\cdot 0000\ 044$	$\cdot 0000\ 018$
$\cdot 29$	$\cdot 0002\ 179$	$\cdot 0000\ 984$	$\cdot 0000\ 437$	$\cdot 0000\ 191$	$\cdot 0000\ 082$	$\cdot 0000\ 035$
$\cdot 30$	$\cdot 0003\ 479$	$\cdot 0001\ 624$	$\cdot 0000\ 745^+$	$\cdot 0000\ 337$	$\cdot 0000\ 150$	$\cdot 0000\ 066$
$\cdot 31$	$\cdot 0005\ 437$	$\cdot 0002\ 620$	$\cdot 0001\ 242$	$\cdot 0000\ 579$	$\cdot 0000\ 266$	$\cdot 0000\ 121$
$\cdot 32$	$\cdot 0008\ 324$	$\cdot 0004\ 138$	$\cdot 0002\ 022$	$\cdot 0000\ 973$	$\cdot 0000\ 461$	$\cdot 0000\ 216$
$\cdot 33$	$\cdot 0012\ 499$	$\cdot 0006\ 401$	$\cdot 0003\ 224$	$\cdot 0001\ 599$	$\cdot 0000\ 781$	$\cdot 0000\ 377$
$\cdot 34$	$\cdot 0018\ 427$	$\cdot 0009\ 714$	$\cdot 0005\ 036$	$\cdot 0002\ 571$	$\cdot 0001\ 294$	$\cdot 0000\ 642$
$\cdot 35$	$\cdot 0026\ 697$	$\cdot 0014\ 473$	$\cdot 0007\ 717$	$\cdot 0004\ 052$	$\cdot 0002\ 098$	$\cdot 0001\ 071$
$\cdot 36$	$\cdot 0038\ 041$	$\cdot 0021\ 190$	$\cdot 0011\ 611$	$\cdot 0006\ 266$	$\cdot 0003\ 333$	$\cdot 0001\ 750$
$\cdot 37$	$\cdot 0053\ 355$	$\cdot 0030\ 511$	$\cdot 0017\ 166$	$\cdot 0009\ 513$	$\cdot 0005\ 197$	$\cdot 0002\ 803$
$\cdot 38$	$\cdot 0073\ 709$	$\cdot 0043\ 240$	$\cdot 0024\ 960$	$\cdot 0014\ 192$	$\cdot 0007\ 957$	$\cdot 0004\ 403$
$\cdot 39$	$\cdot 0100\ 363$	$\cdot 0060\ 353$	$\cdot 0035\ 716$	$\cdot 0020\ 822$	$\cdot 0011\ 971$	$\cdot 0006\ 794$
$\cdot 40$	$\cdot 0134\ 769$	$\cdot 0083\ 016$	$\cdot 0050\ 330$	$\cdot 0030\ 064$	$\cdot 0017\ 712$	$\cdot 0010\ 301$
$\cdot 41$	$\cdot 0178\ 571$	$\cdot 0112\ 596$	$\cdot 0069\ 886$	$\cdot 0042\ 744$	$\cdot 0025\ 787$	$\cdot 0015\ 358$
$\cdot 42$	$\cdot 0233\ 588$	$\cdot 0150\ 667$	$\cdot 0095\ 677$	$\cdot 0059\ 878$	$\cdot 0036\ 968$	$\cdot 0022\ 534$
$\cdot 43$	$\cdot 0301\ 795$	$\cdot 0199\ 000$	$\cdot 0129\ 207$	$\cdot 0082\ 691$	$\cdot 0052\ 211$	$\cdot 0032\ 552$
$\cdot 44$	$\cdot 0385\ 285^+$	$\cdot 0259\ 553$	$\cdot 0172\ 202$	$\cdot 0112\ 629$	$\cdot 0072\ 686$	$\cdot 0046\ 324$
$\cdot 45$	$\cdot 0486\ 222$	$\cdot 0334\ 440$	$\cdot 0226\ 595^+$	$\cdot 0151\ 373$	$\cdot 0099\ 792$	$\cdot 0064\ 976$
$\cdot 46$	$\cdot 0606\ 778$	$\cdot 0425\ 890$	$\cdot 0294\ 509$	$\cdot 0200\ 834$	$\cdot 0135\ 172$	$\cdot 0089\ 866$
$\cdot 47$	$\cdot 0749\ 062$	$\cdot 0536\ 192$	$\cdot 0378\ 220$	$\cdot 0263\ 138$	$\cdot 0180\ 717$	$\cdot 0122\ 610$
$\cdot 48$	$\cdot 0915\ 039$	$\cdot 0667\ 625$	$\cdot 0480\ 111$	$\cdot 0340\ 601$	$\cdot 0238\ 559$	$\cdot 0165\ 089$
$\cdot 49$	$\cdot 1106\ 437$	$\cdot 0822\ 374$	$\cdot 0602\ 600$	$\cdot 0435\ 681$	$\cdot 0311\ 049$	$\cdot 0219\ 443$
$\cdot 50$	$\cdot 1324\ 654$	$\cdot 1002\ 442$	$\cdot 0748\ 064$	$\cdot 0550\ 921$	$\cdot 0400\ 717$	$\cdot 0288\ 063$
$\cdot 51$	$\cdot 1570\ 669$	$\cdot 1209\ 543$	$\cdot 0918\ 742$	$\cdot 0688\ 864$	$\cdot 0510\ 215^+$	$\cdot 0373\ 550$
$\cdot 52$	$\cdot 1844\ 945^+$	$\cdot 1445\ 003$	$\cdot 1116\ 630$	$\cdot 0851\ 961$	$\cdot 0642\ 242$	$\cdot 0478\ 661$
$\cdot 53$	$\cdot 2147\ 363$	$\cdot 1709\ 657$	$\cdot 1343\ 367$	$\cdot 1042\ 459$	$\cdot 0799\ 440$	$\cdot 0606\ 241$
$\cdot 54$	$\cdot 2477\ 148$	$\cdot 2003\ 753$	$\cdot 1600\ 121$	$\cdot 1262\ 281$	$\cdot 0984\ 288$	$\cdot 0759\ 113$
$\cdot 55$	$\cdot 2832\ 836$	$\cdot 2326\ 871$	$\cdot 1887\ 480$	$\cdot 1512\ 900$	$\cdot 1198\ 965^+$	$\cdot 0939\ 970$
$\cdot 56$	$\cdot 3212\ 255$	$\cdot 2677\ 864$	$\cdot 2205\ 351$	$\cdot 1795\ 209$	$\cdot 1445\ 221$	$\cdot 1151\ 231$
$\cdot 57$	$\cdot 3612\ 531$	$\cdot 3054\ 818$	$\cdot 2552\ 876$	$\cdot 2109\ 410$	$\cdot 1724\ 229$	$\cdot 1394\ 899$
$\cdot 58$	$\cdot 4030\ 138$	$\cdot 3455\ 046$	$\cdot 2928\ 382$	$\cdot 2454\ 912$	$\cdot 2036\ 454$	$\cdot 1672\ 396$
$\cdot 59$	$\cdot 4460\ 962$	$\cdot 3875\ 114$	$\cdot 3329\ 351$	$\cdot 2830\ 251$	$\cdot 2381\ 536$	$\cdot 1984\ 423$
$\cdot 60$	$\cdot 4900\ 406$	$\cdot 4310\ 905$	$\cdot 3752\ 430$	$\cdot 3233\ 049$	$\cdot 2758\ 186$	$\cdot 2330\ 816$

TABLE I. THE $I_w(p, q)$ FUNCTION

to .95

 $q = 12$ p

$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$
$\cdot 1605\ 7777 \times \frac{1}{10^8}$	$\cdot 0634\ 6660 \times \frac{1}{10^7}$	$\cdot 5905\ 1179 \times \frac{1}{10^6}$	$\cdot 3690\ 6987 \times \frac{1}{10^5}$	$\cdot 2348\ 6264 \times \frac{1}{10^4}$	$\cdot 1519\ 0000$
$\cdot 0954\ 858$	$\cdot 0937\ 607$	$\cdot 0915\ 544$	$\cdot 0887\ 843$	$\cdot 0853\ 653$	$\cdot 0812\ 200$
$\cdot 0971\ 644$	$\cdot 0960\ 399$	$\cdot 0945\ 839$	$\cdot 0927\ 334$	$\cdot 0904\ 212$	$\cdot 0875\ 000$
$\cdot 0982\ 863$	$\cdot 0975\ 810$	$\cdot 0966\ 588$	$\cdot 0954\ 711$	$\cdot 0939\ 690$	$\cdot 0920\ 000$
$\cdot 0990\ 081$	$\cdot 0985\ 850$	$\cdot 0980\ 260$	$\cdot 0972\ 069$	$\cdot 0963\ 637$	$\cdot 0951\ 000$
$\cdot 0994\ 531$	$\cdot 0992\ 123$	$\cdot 0988\ 891$	$\cdot 0984\ 633$	$\cdot 0979\ 117$	$\cdot 0972\ 000$
$\cdot 0997\ 146$	$\cdot 0995\ 847$	$\cdot 0994\ 083$	$\cdot 0991\ 732$	$\cdot 0988\ 651$	$\cdot 0984\ 000$
$\cdot 0998\ 601$	$\cdot 0997\ 944$	$\cdot 0997\ 041$	$\cdot 0995\ 824$	$\cdot 0994\ 210$	$\cdot 0992\ 000$
$\cdot 0999\ 363$	$\cdot 0999\ 054$	$\cdot 0998\ 624$	$\cdot 0998\ 039$	$\cdot 0997\ 254$	$\cdot 0996\ 200$
$\cdot 0999\ 733$	$\cdot 0999\ 600$	$\cdot 0999\ 413$	$\cdot 0999\ 154$	$\cdot 0998\ 804$	$\cdot 0998\ 000$
$\cdot 0999\ 890$	$\cdot 0999\ 847$	$\cdot 0999\ 773$	$\cdot 0999\ 670$	$\cdot 0999\ 529$	$\cdot 0999\ 300$
$\cdot 0999\ 966$	$\cdot 0999\ 948$	$\cdot 0999\ 923$	$\cdot 0999\ 886$	$\cdot 0999\ 836$	$\cdot 0999\ 700$
$\cdot 0999\ 990$	$\cdot 0999\ 985$	$\cdot 0999\ 977$	$\cdot 0999\ 966$	$\cdot 0999\ 951$	$\cdot 0999\ 900$
$\cdot 0999\ 998$	$\cdot 0999\ 996$	$\cdot 0999\ 994$	$\cdot 0999\ 992$	$\cdot 0999\ 988$	$\cdot 0999\ 900$
$1\cdot 0000\ 000$	$\cdot 0999\ 999$	$\cdot 0999\ 999$	$\cdot 0999\ 998$	$\cdot 0999\ 998$	$\cdot 0999\ 900$
	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$

TABLES OF THE INCOMPLETE β -FUNCTION $\beta = .25$ to $.80$ $q = 12$ $p =$

	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$
$(p, q) = .9986\ 5964 \times \frac{1}{10^{10}}$		$.6657\ 7309 \times \frac{1}{10^{10}}$	$.4498\ 4668 \times \frac{1}{10^{10}}$	$.3077\ 8984 \times \frac{1}{10^{10}}$	$.2130\ 8527 \times \frac{1}{10^{10}}$	$.1491\ 59$
$\frac{1}{2}$						
$\cdot 25$	.0000 001					
$\cdot 26$	.0000 002	.0000 001				
$\cdot 27$	.0000 004	.0000 001	.0000 001			
$\cdot 28$	.0000 007	.0000 003	.0000 001			
$\cdot 29$	.0000 015 ⁻	.0000 006	.0000 002	.0000 001		
$\cdot 30$	.0000 029	.0000 012	.0000 005 ⁺	.0000 002	.0000 001	
$\cdot 31$	.0000 054	.0000 024	.0000 010	.0000 005 ⁻	.0000 002	.0000 00
$\cdot 32$	.0000 100	.0000 046	.0000 021	.0000 009	.0000 004	.0000 00
$\cdot 33$	.0000 179	.0000 084	.0000 039	.0000 018	.0000 008	.0000 00
$\cdot 34$	.0000 315 ⁻	.0000 153	.0000 073	.0000 035 ⁻	.0000 016	.0000 00
$\cdot 35$	.0000 540	.0000 269	.0000 133	.0000 065 ⁻	.0000 031	.0000 01
$\cdot 36$	.0000 908	.0000 465 ⁺	.0000 236	.0000 118	.0000 059	.0000 02
$\cdot 37$	.0001 493	.0000 786	.0000 409	.0000 211	.0000 108	.0000 05
$\cdot 38$	.0002 407	.0001 301	.0000 695 ⁺	.0000 368	.0000 193	.0000 10
$\cdot 39$	.0003 809	.0002 111	.0001 157	.0000 628	.0000 338	.0000 18
$\cdot 40$	.0005 918	.0003 362	.0001 889	.0001 051	.0000 579	.0000 31
$\cdot 41$	.0009 038	.0005 258	.0003 027	.0001 725 ⁺	.0000 974	.0000 54
$\cdot 42$	.0013 572	.0008 083	.0004 703	.0002 779	.0001 606	.0000 92
$\cdot 43$	.0020 055 ⁺	.0012 219	.0007 367	.0004 398	.0002 601	.0001 52
$\cdot 44$	.0029 178	.0018 175 ⁺	.0011 204	.0006 839	.0004 136	.0002 47
$\cdot 45$	.0041 815 ⁻	.0026 615 ⁺	.0016 766	.0010 459	.0006 464	.0003 90
$\cdot 46$	.0059 057	.0038 390	.0024 700	.0015 738	.0009 936	.0006 21
$\cdot 47$	.0082 239	.0054 567	.0035 839	.0023 313	.0015 028	.0009 60
$\cdot 48$	.0112 957	.0076 465 ⁻	.0051 241	.0034 012	.0022 372	.0014 59
$\cdot 49$	.0153 090	.0105 674	.0072 218	.0048 889	.0032 800	.0021 82
$\cdot 50$	.0204 798	.0144 084	.0100 369	.0069 265 ⁻	.0047 377	.0032 13
$\cdot 51$	.0270 515 ⁺	.0193 884	.0137 605 ⁺	.0096 760	.0067 443	.0046 61
$\cdot 52$	.0352 918	.0257 562	.0186 160	.0133 322	.0094 653	.0066 64
$\cdot 53$	.0454 873	.0337 878	.0248 588	.0181 242	.0131 007	.0093 92
$\cdot 54$	.0579 364	.0437 813	.0327 742	.0243 157	.0178 872	.0130 52
$\cdot 55$	.0729 395 ⁻	.0560 496	.0426 728	.0322 029	.0240 985 ⁻	.0178 89
$\cdot 56$	.0907 859	.0709 105 ⁻	.0548 830	.0421 103	.0320 435 ⁻	.0241 91
$\cdot 57$	.1117 402	.0886 733	.0697 400	.0543 822	.0420 618	.0322 80
$\cdot 58$	.1360 256	.1096 237	.0875 729	.0693 725 ⁻	.0545 156	.0425 13
$\cdot 59$	.1638 071	.1340 065 ⁻	.1086 878	.0874 299	.0697 780	.0552 71
$\cdot 60$	.1951 745 ⁺	.1620 064	.1333 491	.1088 802	.0882 175 ⁺	.0709 49
$\cdot 61$	.2301 263	.1937 296	.1617 587	.1340 055 ⁻	.1101 788	.0899 34
$\cdot 62$	.2685 567	.2291 859	.1940 356	.1630 222	.1359 601	.1125 90
$\cdot 63$	.3102 455 ⁺	.2682 730	.2301 955 ⁺	.1960 576	.1657 887	.1392 27
$\cdot 64$	.3548 537	.3107 657	.2701 341	.2331 282	.1997 954	.1700 81
$\cdot 65$	.4019 242	.3563 092	.3136 135 ⁻	.2741 199	.2379 907	.2052 80
$\cdot 66$	.4508 905 ⁺	.4044 205 ⁺	.3602 554	.3187 742	.2802 428	.2448 21
$\cdot 67$	.5010 909	.4544 965 ⁺	.4095 422	.3666 801	.3262 626	.2885 44
$\cdot 68$	.5517 908	.5058 303	.4608 257	.4172 752	.3755 957	.3361 19
$\cdot 69$	.6022 100	.5576 351	.5133 456	.4608 566	.4276 240	.3870 35

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81 \text{ to } .96$ $q = 12$

	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$
$B(p, q) =$	$.9986\ 5964 \times \frac{1}{10^{10}}$	$.6657\ 7309 \times \frac{1}{10^{10}}$	$.4498\ 4668 \times \frac{1}{10^{10}}$	$.3077\ 8984 \times \frac{1}{10^{10}}$	$.2130\ 85$
x					
.81	.9762 371	.9703 615 ⁻	.9635 081	.9556 084	.9466 02
.82	.9841 297	.9800 070	.9751 390	.9694 585 ⁻	.9629 02
.83	.9898 043	.9870 270	.9837 075 ⁻	.9797 866	.9752 06
.84	.9937 278	.9919 392	.9897 757	.9871 895 ⁻	.9841 32
.85	.9963 250 ⁻	.9952 297	.9938 891	.9922 675 ⁻	.9903 27
.86	.9979 624	.9973 288	.9965 440	.9955 836	.9944 21
.87	.9989 395 ⁻	.9985 958	.9981 652	.9976 322	.9969 79
.88	.9994 869	.9993 138	.9990 946	.9988 200	.9984 79
.89	.9997 721	.9996 922	.9995 898	.9994 601	.9992 97
.90	.9999 085 ⁺	.9998 752	.9998 321	.9997 769	.9997 06
.91	.9999 675 ⁺	.9999 553	.9999 392	.9999 184	.9998 91
.92	.9999 901	.9999 862	.9999 811	.9999 743	.9999 65
.93	.9999 975 ⁻	.9999 965 ⁻	.9999 951	.9999 933	.9999 91
.94	.9999 995 ⁺	.9999 993	.9999 990	.9999 987	.9999 98
.95	.9999 999	.9999 999	.9999 999	.9999 998	.9999 99
.96	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000 00

TABLES OF THE INCOMPLETE β -FUNCTION

2 to '97

$q = 12$

$p = 3$

$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$
$q) = .1055\ 0320 \times \frac{1}{100}$	$.7535\ 9425 \times \frac{1}{100}$	$.5432\ 8888 \times \frac{1}{100}$	$.3951\ 1919 \times \frac{1}{100}$	$.2897\ 5407 \times \frac{1}{100}$	$.2141\ 6602$
2 .0000 001					
3 .0000 002	.0000 001				
4 .0000 004	.0000 002	.0000 001			
5 .0000 007	.0000 003	.0000 002	.0000 001		
6 .0000 014	.0000 007	.0000 003	.0000 002	.0000 001	
7 .0000 027	.0000 014	.0000 007	.0000 003	.0000 002	.0000 001
8 .0000 052	.0000 026	.0000 013	.0000 007	.0000 003	.0000 002
9 .0000 095 ⁺	.0000 050 ⁻	.0000 026	.0000 013	.0000 007	.0000 003
0 .0000 171	.0000 092	.0000 049	.0000 026	.0000 014	.0000 007
1 .0000 302	.0000 166	.0000 091	.0000 049	.0000 027	.0000 014
2 .0000 523	.0000 295 ⁻	.0000 165 ⁻	.0000 091	.0000 050 ⁺	.0000 028
3 .0000 886	.0000 511	.0000 292	.0000 166	.0000 094	.0000 053
4 .0001 474	.0000 869	.0000 509	.0000 296	.0000 171	.0000 098
5 .0002 407	.0001 451	.0000 868	.0000 516	.0000 304	.0000 178
6 .0003 860	.0002 378	.0001 454	.0000 882	.0000 532	.0000 319
7 .0006 087	.0003 828	.0002 390	.0001 482	.0000 912	.0000 558
8 .0009 438	.0006 058	.0003 860	.0002 443	.0001 535 ⁺	.0000 959
9 .0014 398	.0009 428	.0006 129	.0003 957	.0002 537	.0001 617
0 .0021 620	.0014 436	.0009 570	.0006 300	.0004 120	.0002 678
1 .0031 967	.0021 755 ⁺	.0014 700	.0009 865 ⁻	.0006 577	.0004 357
2 .0046 557	.0032 281	.0022 223	.0015 195 ⁺	.0010 323	.0006 969
3 .0066 813	.0047 177	.0033 077	.0023 035 ⁻	.0015 938	.0010 960
4 .0094 508	.0067 930	.0048 485 ⁻	.0034 375 ⁺	.0024 217	.0016 956
5 .0131 799	.0096 396	.0070 014	.0050 517	.0036 219	.0025 811
6 .0181 263	.0134 845 ⁺	.0099 627	.0073 126	.0053 338	.0038 672
7 .0245 900	.0185 992	.0139 728	.0104 293	.0077 362	.0057 045 ⁺
8 .0329 114	.0253 004	.0193 196	.0146 583	.0110 536	.0082 864
9 .0434 669	.0339 481	.0263 393	.0203 069	.0155 614	.0118 557
0 .0566 587	.0449 402	.0354 143	.0277 339	.0215 897	.0167 104
1 .0729 017	.0587 019	.0469 664	.0373 470	.0295 232	.0232 066
2 .0926 047	.0756 704	.0614 456	.0495 946	.0397 977	.0317 585 ⁺
3 .1161 470	.0962 746	.0793 126	.0649 531	.0528 912	.0428 337
4 .1438 516	.1209 090	.1010 155 ⁺	.0839 072	.0693 080	.0569 417
5 .1759 547	.1499 033	.1269 613	.1069 229	.0895 563	.0746 159
6 .2125 757	.1834 901	.1574 819	.1344 159	.1141 178	.0963 869
7 .2536 877	.2217 705 ⁺	.1927 980	.1667 136	.1434 116	.1227 482
8 .2990 931	.2646 835 ⁻	.2329 822	.2040 151	.1777 517	.1541 146
9 .3484 064	.3119 792	.2779 256	.2463 515 ⁺	.2173 034	.1907 756
0 .4010 478	.3632 027	.3273 109	.2935 502	.2620 402	.2328 471
1 .4562 496	.4176 894	.3805 969	.3452 084	.3117 073	.2802 261
2 .5130 776	.4745 755 ⁺	.4370 173	.4006 798	.3657 958	.3325 533
3 .5704 672	.5328 260	.4955 976	.4590 788	.4235 339	.3891 912
4 .6272 739	.5912 786	.5551 905 ⁺	.5193 054	.4838 987	.4492 210
5 .6823 343	.6487 040	.6145 312	.5800 915 ⁻	.5456 518	.5114 653
6 .7345 349	.7038 761	.6723 074	.6400 628	.6072 281	.5742 281

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .38 \text{ to } .97$ $q = 12$

	$p = 36$	$p = 37$	$p = 38$	$p = 39$
$B(p, q) = .1594\ 8536 \times \frac{1}{10^{11}}$	$.1196\ 1402 \times \frac{1}{10^{11}}$	$.9032\ 0789 \times \frac{1}{10^{12}}$	$.6864\ 3800 \times \frac{1}{10^{12}}$	
$\cdot 38$	.0000 001			
$\cdot 39$	.0000 002	.0000 001		
$\cdot 40$	.0000 004	.0000 002	.0000 001	
$\cdot 41$	.0000 008	.0000 004		
$\cdot 42$	.0000 015 ⁺	.0000 008	.0000 002	.0000 001
$\cdot 43$	.0000 029	.0000 016	.0000 004	.0000 002
$\cdot 44$	.0000 056	.0000 032	.0000 009	.0000 005 ⁻
$\cdot 45$	.0000 104	.0000 060	.0000 018	.0000 010
$\cdot 46$	.0000 190	.0000 112	.0000 035 ⁻	.0000 020
$\cdot 47$	.0000 339	.0000 205 ⁺	.0000 066	.0000 039
$\cdot 48$	.0000 595 ⁺	.0000 367	.0000 123	.0000 074
$\cdot 49$	.0001 024	.0000 645 ⁺	.0000 226	.0000 138
$\cdot 50$	.0001 730	.0001 111	.0000 404	.0000 252
			.0000 710	.0000 451
$\cdot 51$	.0002 870	.0001 879	.0001 224	.0000 793
$\cdot 52$	.0004 677	.0003 121	.0002 072	.0001 368
$\cdot 53$	.0007 493	.0005 094	.0003 444	.0002 317
$\cdot 54$	.0011 803	.0008 170	.0005 625 ⁺	.0003 853
$\cdot 55$	.0018 287	.0012 885 ⁻	.0009 030	.0006 297
$\cdot 56$	.0027 878	.0019 986	.0014 253	.0010 113
$\cdot 57$	.0041 825 ⁻	.0030 498	.0022 123	.0015 967
$\cdot 58$	.0061 770	.0045 798	.0033 779	.0024 791
$\cdot 59$	.0089 823	.0067 689	.0050 748	.0037 859
$\cdot 60$	.0128 628	.0098 488	.0075 028	.0056 877
$\cdot 61$	.0181 425 ⁺	.0141 095 ⁺	.0109 180	.0084 077
$\cdot 62$	.0252 077	.0199 052	.0156 403	.0122 306
$\cdot 63$	.0345 061	.0276 566	.0220 585 ⁺	.0175 109
$\cdot 64$	.0465 399	.0378 486	.0306 324	.0246 772
$\cdot 65$	.0618 525 ⁺	.0510 214	.0418 881	.0342 330
$\cdot 66$	.0810 065 ⁺	.0677 538	.0564 066	.0467 495 ⁺
$\cdot 67$	.1045 525 ⁺	.0886 364	.0748 023	.0628 504
$\cdot 68$	.1329 898	.1142 356	.0976 914	.0831 848
$\cdot 69$	.1667 187	.1450 474	.1256 487	.1083 890
$\cdot 70$	.2059 895 ⁺	.1814 446	.1591 552	.1390 361
$\cdot 71$	.2508 496	.2236 193	.1985 379	.1755 753
$\cdot 72$	.3010 965 ⁺	.2715 271	.2439 076	.2182 652
$\cdot 73$	.3562 419	.3248 394	.2951 003	.2671 065 ⁻
$\cdot 74$	.4154 945 ⁺	.3829 109	.3516 307	.3217 828
$\cdot 75$	.4777 672	.4447 711	.4126 668	.3816 186
$\cdot 76$	.5417 128	.5091 440	.4770 330	.4455 642
$\cdot 77$	.6057 908	.5745 029	.5432 488	.5122 168
$\cdot 78$	.6683 618	.6391 570	.6096 049	.5798 817
$\cdot 79$	.7278 027	.7013 675 ⁻	.6742 749	.6466 761
$\cdot 80$	.7826 324	.7594 810	.7354 537	.7106 676
$\cdot 81$	.8316 225 ⁺	.8120 675 ⁻	.7885 280	.7685 280

TABLES OF THE INCOMPLETE β -FUNCTION

7 to .80

$q = 12$

$p = 1$

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$
$q) = .1605\ 7777 \times \frac{1}{10^5}$	$.9634\ 6660 \times \frac{1}{10^5}$	$.5905\ 1179 \times \frac{1}{10^5}$	$.3690\ 6987 \times \frac{1}{10^5}$	$.2348\ 6264 \times \frac{1}{10^5}$	$.1519\ 6994$	
7	.0000 001					
8	.0000 002					
9	.0000 004	.0000 001				
0	.0000 009	.0000 003	.0000 001			
1	.0000 019	.0000 006	.0000 002	.0000 001		
2	.0000 039	.0000 013	.0000 005	.0000 002		
3	.0000 076	.0000 027	.0000 010	.0000 003	.0000 001	
4	.0000 143	.0000 054	.0000 020	.0000 007	.0000 003	.0000 001
5	.0000 262	.0000 102	.0000 039	.0000 015	.0000 006	.0000 002
6	.0000 463	.0000 188	.0000 075	.0000 029	.0000 011	.0000 004
7	.0000 796	.0000 335 ⁺	.0000 139	.0000 056	.0000 023	.0000 009
8	.0001 333	.0000 582	.0000 249	.0000 105 ⁺	.0000 044	.0000 018
9	.0002 179	.0000 984	.0000 437	.0000 191	.0000 082	.0000 035
0	.0003 479	.0001 624	.0000 745 ⁺	.0000 337	.0000 150 ⁻	.0000 060
1	.0005 437	.0002 620	.0001 242	.0000 579	.0000 266	.0000 121
2	.0008 324	.0004 138	.0002 022	.0000 973	.0000 461	.0000 216
3	.0012 499	.0006 401	.0003 224	.0001 599	.0000 781	.0000 377
4	.0018 427	.0009 714	.0005 036	.0002 571	.0001 294	.0000 642
5	.0026 697	.0014 473	.0007 717	.0004 052	.0002 098	.0001 071
6	.0038 041	.0021 190	.0011 611	.0006 266	.0003 333	.0001 750
7	.0053 355 ⁻	.0030 511	.0017 166	.0009 513	.0005 197	.0002 803
8	.0073 709	.0043 240	.0024 960	.0014 192	.0007 957	.0004 403
9	.0100 363	.0060 353	.0035 716	.0020 822	.0011 971	.0006 794
0	.0134 769	.0083 016	.0050 330	.0030 064	.0017 712	.0010 301
1	.0178 571	.0112 596	.0069 886	.0042 744	.0025 787	.0015 358
2	.0233 588	.0150 667	.0095 677	.0059 878	.0030 968	.0022 534
3	.0301 795 ⁻	.0199 000	.0129 207	.0082 691	.0052 211	.0032 552
4	.0385 285 ⁺	.0259 553	.0172 202	.0112 629	.0072 686	.0046 324
5	.0486 222	.0334 440	.0226 595 ⁺	.0151 373	.0099 792	.0064 976
6	.0606 778	.0425 890	.0294 509	.0200 834	.0135 172	.0089 866
7	.0749 062	.0536 192	.0378 220	.0263 138	.0180 717	.0122 610
8	.0915 039	.0667 625 ⁻	.0480 111	.0340 601	.0238 559	.0165 089
9	.1106 437	.0822 374	.0602 600	.0435 681	.0311 049	.0219 443
0	.1324 654	.1002 442	.0748 064	.0550 921	.0400 717	.0288 063
1	.1570 669	.1209 543	.0918 742	.0688 864	.0510 215 ⁺	.0373 550
2	.1844 945 ⁺	.1445 003	.1116 630	.0851 961	.0642 242	.0478 601
3	.2147 363	.1709 657	.1343 367	.1042 459	.0799 440	.0606 241
4	.2477 148	.2003 753	.1600 121	.1262 281	.0984 288	.0759 113
5	.2832 836	.2326 871	.1887 480	.1512 900	.1198 965 ⁺	.0939 970
6	.3212 255	.2677 864	.2205 351	.1795 209	.1445 221	.1151 231
7	.3612 531	.3054 818	.2552 876	.2109 410	.1724 229	.1394 899
8	.4030 138	.3455 046	.2928 382	.2454 912	.2036 454	.1672 396
9	.4460 962	.3875 114	.3329 351	.2830 251	.2381 536	.1984 423
0	.4900 406	.4310 905 ⁻	.3752 430	.3233 049	.2758 186	.2330 810

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.95$ $q = 12$

	$p = 18$	$p = 19$	$p = 20$	$p = 21$	$p = 22$
$B(p, q) = .1605\ 7777 \times \frac{x}{10^8}$	$.9634\ 6660 \times \frac{x}{10^8}$	$.5905\ 1179 \times \frac{x}{10^8}$	$.3690\ 6987 \times \frac{x}{10^8}$	$.2348$	
x					
.81	.9954 858	.9937 607	.9915 544	.9887 843	.9853
.82	.9971 644	.9960 399	.9945 839	.9927 334	.9904
.83	.9982 863	.9975 819	.9966 588	.9954 711	.9939
.84	.9990 081	.9985 859	.9980 260	.9972 969	.9963
.85	.9994 531	.9992 123	.9988 801	.9984 633	.9979
.86	.9997 146	.9995 847	.9994 083	.9991 732	.9988
.87	.9998 601	.9997 944	.9997 041	.9995 824	.9994
.88	.9999 363	.9999 054	.9998 624	.9998 039	.9997
.89	.9999 733	.9999 600	.9999 413	.9999 154	.9998
.90	.9999 899	.9999 847	.9999 773	.9999 670	.9999
.91	.9999 966	.9999 948	.9999 923	.9999 886	.9999
.92	.9999 990	.9999 985	.9999 977	.9999 966	.9999
.93	.9999 998	.9999 996	.9999 994	.9999 992	.9999
.94	1.0000 000	.9999 999	.9999 999	.9999 998	.9999
.95		1.0000 000	1.0000 000	1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

5 to .80

$q = 12$

$p = 2$

$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$
$q) = .9986\ 5964 \times \frac{1}{10^6}$	$.6657\ 7309 \times \frac{1}{10^6}$	$.4498\ 4668 \times \frac{1}{10^6}$	$.3077\ 8984 \times \frac{1}{10^6}$	$.2130\ 8527 \times \frac{1}{10^6}$	$.1491\ 596$
.0000 001					
.0000 002	.0000 001				
.0000 004	.0000 001	.0000 001			
.0000 007	.0000 003	.0000 001			
.0000 015-	.0000 006	.0000 002	.0000 001		
.0000 029	.0000 012	.0000 005+	.0000 002	.0000 001	
.0000 054	.0000 024	.0000 010	.0000 005-	.0000 002	.0000 001
.0000 100	.0000 046	.0000 021	.0000 009	.0000 004	.0000 002
.0000 179	.0000 084	.0000 039	.0000 018	.0000 008	.0000 004
.0000 315-	.0000 153	.0000 073	.0000 035-	.0000 016	.0000 008
.0000 540	.0000 269	.0000 133	.0000 065-	.0000 031	.0000 015+
.0000 908	.0000 465+	.0000 236	.0000 118	.0000 059	.0000 029
.0001 493	.0000 786	.0000 409	.0000 211	.0000 108	.0000 054
.0002 407	.0001 301	.0000 695+	.0000 368	.0000 193	.0000 100
.0003 809	.0002 111	.0001 157	.0000 628	.0000 338	.0000 180
.0005 918	.0003 362	.0001 889	.0001 051	.0000 579	.0000 316
.0009 038	.0005 258	.0003 027	.0001 725+	.0000 974	.0000 545-
.0013 572	.0008 083	.0004 763	.0002 779	.0001 606	.0000 920
.0020 055+	.0012 219	.0007 367	.0004 398	.0002 601	.0001 524
.0029 178	.0018 175+	.0011 204	.0006 839	.0004 136	.0002 479
.0041 815-	.0026 615+	.0016 766	.0010 459	.0006 464	.0003 961
.0059 057	.0038 390	.0024 700	.0015 738	.0009 936	.0006 219
.0082 239	.0054 567	.0035 839	.0023 313	.0015 028	.0009 603
.0112 957	.0076 465-	.0051 241	.0034 012	.0022 372	.0014 590
.0153 090	.0105 674	.0072 218	.0048 889	.0032 800	.0021 820
.0204 798	.0144 084	.0100 369	.0069 265-	.0047 377	.0032 133
.0270 515+	.0193 884	.0137 605+	.0096 760	.0067 443	.0046 617
.0352 918	.0257 562	.0186 160	.0133 322	.0094 653	.0066 645+
.0454 873	.0337 878	.0248 588	.0181 242	.0131 007	.0093 923
.0579 364	.0437 813	.0327 742	.0243 157	.0178 872	.0130 521
.0729 395-	.0560 496	.0426 728	.0322 029	.0240 985-	.0178 899
.0907 859	.0709 105-	.0548 830	.0421 103	.0320 435-	.0241 914
.1117 402	.0886 733	.0697 400	.0543 822	.0420 618	.0322 802
.1360 256	.1096 237	.0875 729	.0693 725-	.0545 156	.0425 133
.1638 071	.1340 065-	.1086 878	.0874 299	.0697 780	.0552 719
.1951 745+	.1620 064	.1333 491	.1088 802	.0882 175+	.0709 495-
.2301 263	.1937 296	.1617 587	.1340 055-	.1101 788	.0899 347
.2685 567	.2291 859	.1940 356	.1630 222	.1359 601	.1125 901
.3102 455+	.2682 730	.2301 955+	.1960 576	.1657 887	.1392 276
.3548 537	.3107 657	.2701 341	.2331 282	.1997 954	.1700 817
.4019 242	.3563 092	.3136 135-	.2741 199	.2379 907	.2052 808
.4508 905+	.4044 205+	.3602 554	.3187 742	.2802 428	.2448 214
.5010 909	.4544 905+	.4095 422	.3666 801	.3262 626	.2885 445-
.5517 908	.5058 303	.4608 257	.4172 752	.3755 957	.3361 193
.6022 100	.5576 351	.5133 456	.4608 166		

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.96$ $q = 12$

	$p = 24$	$p = 25$	$p = 26$	$p = 27$	$p =$
$B(p, q) = .9986\ 5964 \times \frac{1}{10^{16}}$		$.6657\ 7309 \times \frac{1}{10^{16}}$	$.4498\ 4668 \times \frac{1}{10^{16}}$	$.3077\ 8984 \times \frac{1}{10^{16}}$	$.2130$
x					
.81	.9762 371	.9703 615 ⁻	.9635 081	.9556 084	.9466
.82	.9841 297	.9800 070	.9751 390	.9694 585 ⁻	.9629
.83	.9898 043	.9870 270	.9837 075 ⁻	.9797 866	.9752
.84	.9937 278	.9919 392	.9897 757	.9871 895 ⁻	.9841
.85	.9963 250 ⁻	.9952 297	.9938 891	.9922 675 ⁻	.9903
.86	.9979 624	.9973 288	.9965 440	.9955 836	.9944
.87	.9989 395 ⁻	.9985 958	.9981 652	.9976 322	.9969
.88	.9994 869	.9993 138	.9990 946	.9988 200	.9984
.89	.9997 721	.9996 922	.9995 898	.9994 601	.9992
.90	.9999 085 ⁺	.9998 752	.9998 321	.9997 769	.9997
.91	.9999 675 ⁺	.9999 553	.9999 392	.9999 184	.9998
.92	.9999 901	.9999 862	.9999 811	.9999 743	.9999
.93	.9999 975 ⁻	.9999 965 ⁻	.9999 951	.9999 933	.9999
.94	.9999 995 ⁺	.9999 993	.9999 990	.9999 987	.9999
.95	.9999 999	.9999 999	.9999 999	.9999 998	.9999
.96	1.0000 000	1.0000 000	1.0000 000	1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

2 to '97

$q = 12$

$p = 3$

$p = 30$	$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$
$q) = \cdot 1055\ 0320 \times \frac{1}{10^{10}}$	$\cdot 7535\ 9425 \times \frac{1}{10^{11}}$	$\cdot 5432\ 8888 \times \frac{1}{10^{11}}$	$\cdot 3951\ 1919 \times \frac{1}{10^{11}}$	$\cdot 2897\ 5407 \times \frac{1}{10^{11}}$	$\cdot 2141\ 6605$
$\cdot 0000\ 001$					
$\cdot 0000\ 002$	$\cdot 0000\ 001$				
$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 002$			
$\cdot 0000\ 014$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 0000\ 027$	$\cdot 0000\ 014$	$\cdot 0000\ 007$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	
$\cdot 0000\ 052$	$\cdot 0000\ 026$	$\cdot 0000\ 013$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 095^+$	$\cdot 0000\ 050^-$	$\cdot 0000\ 026$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 002$
$\cdot 0000\ 171$	$\cdot 0000\ 092$	$\cdot 0000\ 049$	$\cdot 0000\ 013$	$\cdot 0000\ 007$	$\cdot 0000\ 003$
			$\cdot 0000\ 026$	$\cdot 0000\ 014$	$\cdot 0000\ 007$
$\cdot 0000\ 302$	$\cdot 0000\ 166$	$\cdot 0000\ 091$	$\cdot 0000\ 049$	$\cdot 0000\ 027$	$\cdot 0000\ 014$
$\cdot 0000\ 523$	$\cdot 0000\ 295^-$	$\cdot 0000\ 165^-$	$\cdot 0000\ 091$	$\cdot 0000\ 050^+$	$\cdot 0000\ 028$
$\cdot 0000\ 886$	$\cdot 0000\ 511$	$\cdot 0000\ 292$	$\cdot 0000\ 166$	$\cdot 0000\ 094$	$\cdot 0000\ 053$
$\cdot 0001\ 474$	$\cdot 0000\ 869$	$\cdot 0000\ 509$	$\cdot 0000\ 296$	$\cdot 0000\ 171$	$\cdot 0000\ 098$
$\cdot 0002\ 407$	$\cdot 0001\ 451$	$\cdot 0000\ 868$	$\cdot 0000\ 516$	$\cdot 0000\ 304$	$\cdot 0000\ 178$
$\cdot 0003\ 860$	$\cdot 0002\ 378$	$\cdot 0001\ 454$	$\cdot 0000\ 882$	$\cdot 0000\ 532$	$\cdot 0000\ 319$
$\cdot 0006\ 087$	$\cdot 0003\ 828$	$\cdot 0002\ 390$	$\cdot 0001\ 482$	$\cdot 0000\ 912$	$\cdot 0000\ 558$
$\cdot 0009\ 438$	$\cdot 0006\ 038$	$\cdot 0003\ 860$	$\cdot 0002\ 443$	$\cdot 0001\ 535^+$	$\cdot 0000\ 959$
$\cdot 0014\ 398$	$\cdot 0009\ 428$	$\cdot 0006\ 129$	$\cdot 0003\ 957$	$\cdot 0002\ 537$	$\cdot 0001\ 617$
$\cdot 0021\ 620$	$\cdot 0014\ 436$	$\cdot 0009\ 570$	$\cdot 0006\ 300$	$\cdot 0004\ 120$	$\cdot 0002\ 678$
$\cdot 0031\ 967$	$\cdot 0021\ 755^+$	$\cdot 0014\ 700$	$\cdot 0009\ 865^-$	$\cdot 0006\ 577$	$\cdot 0004\ 357$
$\cdot 0046\ 557$	$\cdot 0032\ 281$	$\cdot 0022\ 223$	$\cdot 0015\ 195^+$	$\cdot 0010\ 323$	$\cdot 0006\ 969$
$\cdot 0066\ 813$	$\cdot 0047\ 177$	$\cdot 0033\ 077$	$\cdot 0023\ 035^-$	$\cdot 0015\ 938$	$\cdot 0010\ 960$
$\cdot 0094\ 508$	$\cdot 0067\ 930$	$\cdot 0048\ 485^-$	$\cdot 0034\ 375^+$	$\cdot 0024\ 217$	$\cdot 0016\ 956$
$\cdot 0131\ 799$	$\cdot 0096\ 396$	$\cdot 0070\ 014$	$\cdot 0050\ 517$	$\cdot 0036\ 219$	$\cdot 0025\ 811$
$\cdot 0181\ 263$	$\cdot 0134\ 845^+$	$\cdot 0099\ 627$	$\cdot 0073\ 126$	$\cdot 0053\ 338$	$\cdot 0038\ 672$
$\cdot 0245\ 900$	$\cdot 0185\ 992$	$\cdot 0139\ 728$	$\cdot 0104\ 293$	$\cdot 0077\ 362$	$\cdot 0057\ 045^+$
$\cdot 0329\ 114$	$\cdot 0253\ 004$	$\cdot 0193\ 196$	$\cdot 0146\ 583$	$\cdot 0110\ 536$	$\cdot 0082\ 864$
$\cdot 0434\ 669$	$\cdot 0339\ 481$	$\cdot 0263\ 393$	$\cdot 0203\ 069$	$\cdot 0155\ 614$	$\cdot 0118\ 557$
$\cdot 0566\ 587$	$\cdot 0449\ 402$	$\cdot 0354\ 143$	$\cdot 0277\ 339$	$\cdot 0215\ 897$	$\cdot 0167\ 104$
$\cdot 0729\ 017$	$\cdot 0587\ 019$	$\cdot 0469\ 664$	$\cdot 0373\ 470$	$\cdot 0295\ 232$	$\cdot 0232\ 066$
$\cdot 0926\ 047$	$\cdot 0756\ 704$	$\cdot 0614\ 456$	$\cdot 0495\ 946$	$\cdot 0397\ 977$	$\cdot 0317\ 585^+$
$\cdot 1161\ 470$	$\cdot 0962\ 746$	$\cdot 0793\ 126$	$\cdot 0649\ 531$	$\cdot 0528\ 912$	$\cdot 0428\ 337$
$\cdot 1438\ 516$	$\cdot 1209\ 090$	$\cdot 1010\ 155^+$	$\cdot 0839\ 072$	$\cdot 0693\ 080$	$\cdot 0569\ 417$
$\cdot 1759\ 547$	$\cdot 1499\ 033$	$\cdot 1269\ 613$	$\cdot 1069\ 229$	$\cdot 0895\ 563$	$\cdot 0746\ 159$
$\cdot 2125\ 757$	$\cdot 1834\ 901$	$\cdot 1574\ 819$	$\cdot 1344\ 159$	$\cdot 1141\ 178$	$\cdot 0963\ 869$
$\cdot 2536\ 877$	$\cdot 2217\ 705^+$	$\cdot 1927\ 980$	$\cdot 1667\ 136$	$\cdot 1434\ 116$	$\cdot 1227\ 482$
$\cdot 2990\ 931$	$\cdot 2646\ 835^-$	$\cdot 2329\ 822$	$\cdot 2040\ 151$	$\cdot 1777\ 517$	$\cdot 1541\ 146$
$\cdot 3484\ 064$	$\cdot 3119\ 792$	$\cdot 2779\ 256$	$\cdot 2463\ 515^+$	$\cdot 2173\ 034$	$\cdot 1907\ 756$
$\cdot 4010\ 478$	$\cdot 3632\ 027$	$\cdot 3273\ 109$	$\cdot 2935\ 502$	$\cdot 2620\ 402$	$\cdot 2328\ 471$
$\cdot 4562\ 496$	$\cdot 4176\ 894$	$\cdot 3805\ 969$	$\cdot 3452\ 084$	$\cdot 3117\ 073$	$\cdot 2802\ 261$
$\cdot 5130\ 776$	$\cdot 4745\ 755^+$	$\cdot 4370\ 173$	$\cdot 4006\ 798$	$\cdot 3657\ 958$	$\cdot 3325\ 533$
$\cdot 5704\ 672$	$\cdot 5328\ 260$	$\cdot 4955\ 976$	$\cdot 4590\ 788$	$\cdot 4235\ 339$	$\cdot 3891\ 912$
$\cdot 6272\ 739$	$\cdot 5912\ 786$	$\cdot 5551\ 905^+$	$\cdot 5193\ 054$	$\cdot 4838\ 987$	$\cdot 4492\ 210$
$\cdot 6823\ 343$	$\cdot 6487\ 040$	$\cdot 6145\ 312$	$\cdot 5800\ 915^-$	$\cdot 5456\ 518$	$\cdot 5114\ 653$
$\cdot 7345\ 349$	$\cdot 7038\ 761$	$\cdot 6723\ 074$	$\cdot 6400\ 678$	$\cdot 6072\ 084$	$\cdot 5744\ 280$

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .38$ to $.97$ $q = 12$

	$p = 36$	$p = 37$	$p = 38$	$p = 39$	
$B(p, q) = .1594\ 8536 \times \frac{1}{10^{11}}$					
x					
.38	.0000 001				
.39	.0000 002	.0000 001			
.40	.0000 004	.0000 002	.0000 001		
.41	.0000 008	.0000 004	.0000 002	.0000 001	
.42	.0000 015 ⁺	.0000 008	.0000 004	.0000 002	
.43	.0000 029	.0000 016	.0000 009	.0000 005 ⁻	
.44	.0000 056	.0000 032	.0000 018	.0000 010	
.45	.0000 104	.0000 060	.0000 035 ⁻	.0000 020	
.46	.0000 190	.0000 112	.0000 066	.0000 039	
.47	.0000 339	.0000 205 ⁺	.0000 123	.0000 074	
.48	.0000 595 ⁺	.0000 367	.0000 226	.0000 138	
.49	.0001 024	.0000 645 ⁺	.0000 404	.0000 252	
.50	.0001 730	.0001 111	.0000 710	.0000 451	
.51	.0002 870	.0001 879	.0001 224	.0000 793	
.52	.0004 677	.0003 121	.0002 072	.0001 368	
.53	.0007 493	.0005 094	.0003 444	.0002 317	
.54	.0011 803	.0008 170	.0005 625 ⁺	.0003 853	
.55	.0018 287	.0012 885 ⁻	.0009 030	.0006 297	
.56	.0027 878	.0019 986	.0014 253	.0010 113	
.57	.0041 825 ⁻	.0030 498	.0022 123	.0015 967	
.58	.0061 770	.0045 708	.0033 779	.0024 791	
.59	.0089 823	.0067 689	.0050 748	.0037 859	
.60	.0128 628	.0098 488	.0075 028	.0056 877	
.61	.0181 425 ⁺	.0141 095 ⁺	.0109 180	.0084 077	
.62	.0252 077	.0199 052	.0156 403	.0122 306	
.63	.0345 061	.0276 566	.0220 585 ⁺	.0175 109	
.64	.0465 399	.0378 486	.0306 324	.0246 772	
.65	.0618 525 ⁺	.0510 214	.0418 881	.0342 330	
.66	.0810 065 ⁺	.0677 538	.0564 066	.0467 495 ⁺	
.67	.1045 525 ⁺	.0886 364	.0748 023	.0628 504	
.68	.1329 898	.1142 356	.0976 914	.0831 848	
.69	.1667 187	.1450 474	.1256 487	.1083 890	
.70	.2059 895 ⁺	.1814 446	.1591 552	.1390 361	
.71	.2508 496	.2236 193	.1985 379	.1755 753	
.72	.3010 965 ⁺	.2715 271	.2439 076	.2182 652	
.73	.3562 419	.3248 394	.2951 003	.2671 065 ⁻	
.74	.4154 945 ⁺	.3829 109	.3516 307	.3217 828	
.75	.4777 672	.4447 711	.4126 668	.3816 186	
.76	.5417 128	.5091 440	.4770 330	.4455 642	
.77	.6057 908	.5745 029	.5432 488	.5122 168	
.78	.6683 618	.6391 570	.6096 049	.5798 817	
.79	.7278 027	.7013 675 ⁻	.6742 749	.6466 761	
.80	.7826 324	.7594 810	.7354 537	.7106 676	
.81	.8316 325 ⁺	.8120 675 ⁻	.7915 082	.7666 082	

$x = .42$ to $.98$ $q = 12$ $p = .41$ to $.45$

	$p = 41$	$p = 42$	$p = 43$	$p = 44$	$p = 45$
$B(p, q) = .4037\ 8706 \times \frac{1}{10^{11}}$	$.3123\ 6357 \times \frac{1}{10^{11}}$	$.2429\ 4945 \times \frac{1}{10^{11}}$	$.1899\ 4229 \times \frac{1}{10^{11}}$	$.1492\ 4037 \times \frac{1}{10^{11}}$	
x					
.42	.0000 001				
.43	.0000 001	.0000 001			
.44	.0000 003	.0000 002	.0000 001	.0000 001	
.45	.0000 006	.0000 004	.0000 002	.0000 001	.0000 001
.46	.0000 013	.0000 008	.0000 004	.0000 002	.0000 001
.47	.0000 026	.0000 015 ⁺	.0000 009	.0000 005 ⁺	.0000 003
.48	.0000 051	.0000 030	.0000 018	.0000 011	.0000 006
.49	.0000 096	.0000 059	.0000 036	.0000 022	.0000 013
.50	.0000 179	.0000 112	.0000 070	.0000 044	.0000 027
.51	.0000 328	.0000 209	.0000 133	.0000 084	.0000 053
.52	.0000 588	.0000 382	.0000 248	.0000 160	.0000 103
.53	.0001 033	.0000 685 ⁻	.0000 452	.0000 297	.0000 195
.54	.0001 782	.0001 203	.0000 809	.0000 542	.0000 361
.55	.0003 017	.0002 074	.0001 420	.0000 968	.0000 637
.56	.0005 018	.0003 511	.0002 446	.0001 607	.0001 172
.57	.0008 199	.0005 836	.0004 136	.0002 919	.0002 052
.58	.0013 165 ⁻	.0009 529	.0006 868	.0004 929	.0003 524
.59	.0020 776	.0015 288	.0011 202	.0008 175 ⁻	.0005 942
.60	.0032 234	.0024 106	.0017 952	.0013 315 ⁻	.0009 837
.61	.0049 175 ⁺	.0037 362	.0028 269	.0021 303	.0015 991
.62	.0073 779	.0056 931	.0043 751	.0033 488	.0025 534
.63	.0108 873	.0085 298	.0066 556	.0051 728	.0040 051
.64	.0158 036	.0125 671	.0099 533	.0078 525 ⁻	.0061 718
.65	.0225 669	.0182 085 ⁻	.0146 335 ⁺	.0117 154	.0093 444
.66	.0317 020	.0259 461	.0211 522	.0171 789	.0139 010
.67	.0438 139	.0363 615 ⁻	.0300 606	.0247 591	.0203 191
.68	.0595 731	.0501 167	.0420 021	.0350 727	.0291 827
.69	.0796 885 ⁻	.0679 337	.0576 985 ⁺	.0488 297	.0411 803
.70	.1048 658	.0905 591	.0779 216	.0668 123	.0570 916
.71	.1357 519	.1187 134	.1034 477	.0898 364	.0777 593
.72	.1728 661	.1530 238	.1349 957	.1186 948	.1040 241
.73	.2165 220	.1939 450 ⁺	.1731 473	.1540 811	.1366 832
.74	.2667 482	.2416 730	.2182 575 ⁺	.1964 975 ⁻	.1763 694
.75	.3232 166	.2960 612	.2703 606	.2461 542	.2234 607
.76	.3851 909	.3565 521	.3290 860	.3028 719	.2779 685 ⁺
.77	.4515 074	.4221 305 ⁺	.3935 978	.3660 015 ⁻	.3394 401
.78	.5205 987	.4913 562	.4625 732	.4343 793	.4068 002
.79	.5905 683	.5623 581	.5342 352	.5063 347	.4787 830
.80	.6593 159	.6330 064	.6064 463	.5797 626	.5530 790
.81	.7247 058	.7010 470	.6768 643	.6522 654	.6273 591
.82	.7847 603	.7643 099	.7431 486	.7213 574	.6990 214
.83	.8378 538	.8209 240	.8031 920	.7847 095 ⁺	.7655 339
.84	.8828 766	.8695 121	.8553 456	.8404 017	.8247 106
.85	.9193 390	.9093 313	.8985 968	.8871 384	.8739 618
.86	.9473 948	.9403 310	.9266 550		
.87					

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .46$ to $.98$ $q = 12$

	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .1178\ 2135 \times \frac{1}{10^{13}}$		$.9344\ 4517 \times \frac{1}{10^{13}}$	$.7443\ 8852 \times \frac{1}{10^{13}}$	$.5955\ 1082 \times \frac{1}{10^{13}}$
.46	.0000 001			
.47	.0000 002	.0000 001	.0000 001	
.48	.0000 004	.0000 002	.0000 001	.0000 001
.49	.0000 008	.0000 005	.0000 003	.0000 002
.50	.0000 017	.0000 010	.0000 006	.0000 004
.51	.0000 033	.0000 021	.0000 013	.0000 008
.52	.0000 066	.0000 042	.0000 027	.0000 017
.53	.0000 127	.0000 082	.0000 053	.0000 034
.54	.0000 240	.0000 159	.0000 105	.0000 069
.55	.0000 444	.0000 299	.0000 201	.0000 134
.56	.0000 807	.0000 553	.0000 378	.0000 257
.57	.0001 437	.0001 002	.0000 697	.0000 483
.58	.0002 510	.0001 781	.0001 259	.0000 887
.59	.0004 303	.0003 104	.0002 232	.0001 599
.60	.0007 240	.0005 309	.0003 880	.0002 826
.61	.0011 960	.0008 912	.0006 618	.0004 898
.62	.0019 398	.0014 683	.0011 076	.0008 327
.63	.0030 897	.0023 750	.0018 194	.0013 891
.64	.0048 333	.0037 718	.0029 334	.0022 739
.65	.0074 265 ⁺	.0058 818	.0046 427	.0036 528
.66	.0112 086	.0090 068	.0072 135	.0057 586
.67	.0166 171	.0135 437	.0110 025 ⁺	.0089 098
.68	.0241 984	.0199 986	.0164 743	.0135 286
.69	.0346 121	.0289 962	.0242 144	.0201 587
.70	.0486 239	.0412 790	.0349 343	.0294 752
.71	.0670 829	.0576 926	.0494 652	.0422 850
.72	.0908 791	.0791 515 ⁺	.0687 314	.0595 096
.73	.1208 782	.1065 815 ⁺	.0937 024	.0821 460
.74	.1578 337	.1408 373	.1253 163	.1111 987
.75	.2022 801	.1825 960	.1643 777	.1475 827
.76	.2544 154	.2322 346	.2114 318	.1919 985
.77	.3139 883	.2897 040	.2666 287	.2447 890
.78	.3802 075	.3544 180	.3295 943	.3057 946
.79	.4516 965 ⁺	.4251 813	.3993 317	.3742 307
.80	.5265 139	.5001 799	.4741 820	.4486 175
.81	.6022 535 ⁺	.5770 552	.5518 675 ⁺	.5267 901
.82	.6762 288	.6530 695	.6296 342	.6060 134
.83	.7457 277	.7253 574	.7044 930	.6832 070
.84	.8083 081	.7912 353	.7735 377	.7552 649
.85	.8620 858	.8485 220	.8342 943	.8194 294
.86	.9059 609	.8958 105	.8850 381	.8736 508
.87	.9397 316	.9326 321	.9250 101	.9168 592
.88	.9640 639	.9594 678	.9544 765 ⁺	.9490 777
.89	.9803 162	.9775 956	.9746 075	.9713 387
.90	.9902 551	.9888 258	.9875 000	

TABLES OF THE INCOMPLETE β -FUNCTION $p = .10$ to $.70$ $q = 13$ $p =$

	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$\beta(p, q) = .1479\ 2046 \times \frac{1}{10^8}$	$.7396\ 0230 \times \frac{1}{10^8}$	$.3834\ 9749 \times \frac{1}{10^8}$	$.2054\ 4508 \times \frac{1}{10^8}$	$.1133\ 4901 \times \frac{1}{10^8}$	$.6423\ 1000 \times \frac{1}{10^8}$	
x						
.10	.0000 002					
.11	.0000 005-	.0000 001				
.12	.0000 014	.0000 003	.0000 001			
.13	.0000 034	.0000 008	.0000 002			
.14	.0000 078	.0000 020	.0000 005+	.0000 001		
.15	.0000 169	.0000 047	.0000 012	.0000 003	.0000 001	
.16	.0000 344	.0000 101	.0000 029	.0000 008	.0000 002	.0000 000
.17	.0000 664	.0000 207	.0000 063	.0000 018	.0000 005+	.0000 000
.18	.0001 224	.0000 403	.0000 129	.0000 040	.0000 012	.0000 000
.19	.0002 166	.0000 753	.0000 254	.0000 083	.0000 027	.0000 000
.20	.0003 690	.0001 348	.0000 479	.0000 165+	.0000 056	.0000 000
.21	.0006 080	.0002 330	.0000 867	.0000 315-	.0000 111	.0000 000
.22	.0009 712	.0003 894	.0001 517	.0000 576	.0000 213	.0000 000
.23	.0015 081	.0006 313	.0002 569	.0001 018	.0000 394	.0000 000
.24	.0022 818	.0009 954	.0004 221	.0001 744	.0000 704	.0000 000
.25	.0033 704	.0015 295-	.0006 748	.0002 901	.0001 218	.0000 500
.26	.0048 691	.0022 945+	.0010 514	.0004 696	.0002 049	.0000 800
.27	.0068 899	.0033 666	.0015 999	.0007 413	.0003 356	.0001 400
.28	.0095 630	.0048 380	.0023 810	.0011 426	.0005 359	.0002 400
.29	.0130 355-	.0068 187	.0034 706	.0017 229	.0008 359	.0003 900
.30	.0174 697	.0094 367	.0049 612	.0025 444	.0012 756	.0006 200
.31	.0230 415-	.0128 375+	.0069 630	.0036 850-	.0019 066	.0009 600
.32	.0299 357	.0171 832	.0096 046	.0052 394	.0027 948	.0014 600
.33	.0383 424	.0226 503	.0130 333	.0073 207	.0040 218	.0021 600
.34	.0484 512	.0294 262	.0174 132	.0100 613	.0056 869	.0031 400
.35	.0604 449	.0377 051	.0229 242	.0136 123	.0079 087	.0045 000
.36	.0744 932	.0476 829	.0297 584	.0181 433	.0108 257	.0063 300
.37	.0907 452	.0595 507	.0381 156	.0238 398	.0145 963	.0087 600
.38	.1093 229	.0734 880	.0481 987	.0309 009	.0193 978	.0119 400
.39	.1303 145-	.0896 555+	.0602 068	.0395 338	.0254 245+	.0160 300
.40	.1537 678	.1081 877	.0743 283	.0499 495-	.0328 843	.0212 300
.41	.1796 859	.1291 855+	.0907 331	.0623 552	.0419 941	.0277 500
.42	.2080 232	.1527 094	.1095 647	.0769 473	.0529 735-	.0357 900
.43	.2386 827	.1787 738	.1309 322	.0939 029	.0660 383	.0455 900
.44	.2715 160	.2073 422	.1549 030	.1133 713	.0813 918	.0573 800
.45	.3063 240	.2383 244	.1814 962	.1354 654	.0992 161	.0713 800
.46	.3428 601	.2715 750-	.2106 771	.1602 536	.1196 628	.0878 100
.47	.3808 351	.3068 938	.2423 536	.1877 527	.1428 434	.1068 300
.48	.4199 229	.3440 288	.2763 747	.2179 215-	.1688 208	.1286 100
.49	.4597 693	.3826 808	.3125 302	.2506 575-	.1976 015+	.1532 500
.50	.5000 000	.4225 095-	.3505 540	.2857 941	.2291 292	.1807 900
.51	.5402 307	.4631 422	.3901 283	.3231 016	.2632 803	.2112 300
.52	.5800 771	.5041 830	.4308 910	.3622 897	.2998 625-	.2444 800
.53	.6195 600	.5450 287	.4620 600	.3999 000	.3328 000	.2777 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.93$ $q = 13$

	$p = 13$	$p = 14$	$p = 15$	$p = 16$	$p =$
$B(p, q) = .1479\ 2046 \times \frac{x}{10^7}$		$.7396\ 0230 \times \frac{x}{10^8}$	$.3834\ 9749 \times \frac{x}{10^8}$	$.2054\ 4508 \times \frac{x}{10^8}$	$.1133$
x					
.71	.9869 645 ⁺	.9807 478	.9725 507	.9620 747	.9490
.72	.9904 370	.9857 119	.9793 939	.9712 057	.9608
.73	.9931 101	.9895 867	.9848 101	.9785 336	.9705
.74	.9951 309	.9925 564	.9890 183	.9843 056	.9782
.75	.9966 296	.9947 886	.9922 244	.9887 627	.9842
.76	.9977 182	.9964 319	.9946 164	.9921 327	.9888
.77	.9984 919	.9976 152	.9963 614	.9946 238	.9922
.78	.9990 288	.9984 471	.9976 043	.9964 211	.9948
.79	.9993 920	.9990 170	.9984 668	.9976 845 ⁻	.9966
.80	.9996 310	.9993 968	.9990 488	.9985 477	.9978
.81	.9997 834	.9996 422	.9994 296	.9991 197	.9986
.82	.9998 776	.9997 955 ⁺	.9996 706	.9994 861	.9992
.83	.9999 336	.9998 879	.9998 175 ⁻	.9997 123	.9995
.84	.9999 656	.9999 414	.9999 035 ⁻	.9998 462	.9997
.85	.9999 831	.9999 709	.9999 516	.9999 220	.9998
.86	.9999 922	.9999 864	.9999 771	.9999 627	.9999
.87	.9999 966	.9999 940	.9999 899	.9999 834	.9999
.88	.9999 986	.9999 976	.9999 959	.9999 931	.9999
.89	.9999 995 ⁺	.9999 991	.9999 985 ⁻	.9999 974	.9999
.90	.9999 998	.9999 997	.9999 995 ⁻	.9999 991	.9999
.91	1.0000 000	.9999 999	.9999 998	.9999 997	.9999
.92		1.0000 000	1.0000 000	.9999 999	.9999
.93				1.0000 000	1.0000

TABLES OF THE INCOMPLETE β -FUNCTION

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$q = 13$

$p = 19$ to

$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$\cdot 3729\ 5481 \times \frac{1}{10^8}$	$\cdot 2214\ 4192 \times \frac{1}{10^8}$	$\cdot 1342\ 0722 \times \frac{1}{10^8}$	$\cdot 8289\ 2697 \times \frac{1}{10^8}$	$\cdot 5210\ 3981 \times \frac{1}{10^8}$	$\cdot 3328\ 8655 \times \frac{1}{10^8}$
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 006$					
$\cdot 0000\ 013$	$\cdot 0000\ 004$	$\cdot 0000\ 001$			
$\cdot 0000\ 027$	$\cdot 0000\ 010$	$\cdot 0000\ 003$	$\cdot 0000\ 001$		
$\cdot 0000\ 055^+$	$\cdot 0000\ 020$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 0000\ 108$	$\cdot 0000\ 041$	$\cdot 0000\ 015^+$	$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 202$	$\cdot 0000\ 080$	$\cdot 0000\ 031$	$\cdot 0000\ 012$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 367$	$\cdot 0000\ 151$	$\cdot 0000\ 061$	$\cdot 0000\ 024$	$\cdot 0000\ 010$	$\cdot 0000\ 004$
$\cdot 0000\ 646$	$\cdot 0000\ 276$	$\cdot 0000\ 116$	$\cdot 0000\ 048$	$\cdot 0000\ 019$	$\cdot 0000\ 008$
$\cdot 0001\ 108$	$\cdot 0000\ 490$	$\cdot 0000\ 213$	$\cdot 0000\ 091$	$\cdot 0000\ 038$	$\cdot 0000\ 016$
$\cdot 0001\ 850^+$	$\cdot 0000\ 847$	$\cdot 0000\ 381$	$\cdot 0000\ 169$	$\cdot 0000\ 074$	$\cdot 0000\ 032$
$\cdot 0003\ 016$	$\cdot 0001\ 426$	$\cdot 0000\ 664$	$\cdot 0000\ 304$	$\cdot 0000\ 137$	$\cdot 0000\ 061$
$\cdot 0004\ 803$	$\cdot 0002\ 346$	$\cdot 0001\ 127$	$\cdot 0000\ 533$	$\cdot 0000\ 249$	$\cdot 0000\ 114$
$\cdot 0007\ 487$	$\cdot 0003\ 771$	$\cdot 0001\ 868$	$\cdot 0000\ 912$	$\cdot 0000\ 439$	$\cdot 0000\ 208$
$\cdot 0011\ 432$	$\cdot 0005\ 933$	$\cdot 0003\ 029$	$\cdot 0001\ 523$	$\cdot 0000\ 755^-$	$\cdot 0000\ 369$
$\cdot 0017\ 120$	$\cdot 0009\ 145^-$	$\cdot 0004\ 806$	$\cdot 0002\ 488$	$\cdot 0001\ 270$	$\cdot 0000\ 640$
$\cdot 0025\ 169$	$\cdot 0013\ 825^+$	$\cdot 0007\ 473$	$\cdot 0003\ 979$	$\cdot 0002\ 089$	$\cdot 0001\ 082$
$\cdot 0036\ 356$	$\cdot 0020\ 519$	$\cdot 0011\ 397$	$\cdot 0006\ 236$	$\cdot 0003\ 365^+$	$\cdot 0001\ 792$
$\cdot 0051\ 642$	$\cdot 0029\ 922$	$\cdot 0017\ 064$	$\cdot 0009\ 588$	$\cdot 0005\ 313$	$\cdot 0002\ 906$
$\cdot 0072\ 185^+$	$\cdot 0042\ 905^+$	$\cdot 0025\ 103$	$\cdot 0014\ 473$	$\cdot 0008\ 230$	$\cdot 0004\ 620$
$\cdot 0099\ 302$	$\cdot 0060\ 538$	$\cdot 0036\ 311$	$\cdot 0021\ 464$	$\cdot 0012\ 515^+$	$\cdot 0007\ 204$
$\cdot 134\ 769$	$\cdot 0084\ 105^+$	$\cdot 0051\ 681$	$\cdot 0031\ 299$	$\cdot 0018\ 700$	$\cdot 0011\ 031$
$\cdot 180\ 220$	$\cdot 0115\ 123$	$\cdot 0072\ 420$	$\cdot 0044\ 906$	$\cdot 0027\ 473$	$\cdot 0016\ 596$
$\cdot 237\ 734$	$\cdot 0155\ 341$	$\cdot 0099\ 973$	$\cdot 0063\ 430$	$\cdot 0039\ 710$	$\cdot 0024\ 550^-$
$\cdot 309\ 505^-$	$\cdot 0206\ 735^+$	$\cdot 0136\ 030$	$\cdot 0088\ 253$	$\cdot 0056\ 503$	$\cdot 0035\ 728$
$\cdot 397\ 858$	$\cdot 0271\ 491$	$\cdot 0182\ 528$	$\cdot 0121\ 017$	$\cdot 0079\ 189$	$\cdot 0051\ 183$
$\cdot 505\ 194$	$\cdot 0351\ 965^-$	$\cdot 0241\ 639$	$\cdot 0163\ 624$	$\cdot 0109\ 367$	$\cdot 0072\ 213$
$\cdot 633\ 911$	$\cdot 0450\ 634$	$\cdot 0315\ 742$	$\cdot 0218\ 234$	$\cdot 0148\ 915^+$	$\cdot 0100\ 392$
$\cdot 786\ 314$	$\cdot 0570\ 025^-$	$\cdot 0407\ 375^-$	$\cdot 0287\ 246$	$\cdot 0199\ 989$	$\cdot 0137\ 581$
$\cdot 964\ 522$	$\cdot 0712\ 628$	$\cdot 0519\ 174$	$\cdot 0373\ 254$	$\cdot 0265\ 008$	$\cdot 0185\ 941$
$\cdot 170\ 351$	$\cdot 0880\ 798$	$\cdot 0653\ 788$	$\cdot 0478\ 991$	$\cdot 0346\ 622$	$\cdot 0247\ 920$
$\cdot 405\ 208$	$\cdot 1076\ 636$	$\cdot 0813\ 778$	$\cdot 0607\ 247$	$\cdot 0447\ 655^+$	$\cdot 0326\ 227$
$\cdot 569\ 978$	$\cdot 1301\ 872$	$\cdot 1001\ 498$	$\cdot 0760\ 770$	$\cdot 0571\ 032$	$\cdot 0423\ 779$
$\cdot 964\ 928$	$\cdot 1557\ 745^-$	$\cdot 1218\ 969$	$\cdot 0942\ 140$	$\cdot 0719\ 670$	$\cdot 0543\ 629$
$\cdot 289\ 617$	$\cdot 1844\ 879$	$\cdot 1467\ 742$	$\cdot 1153\ 640$	$\cdot 0896\ 362$	$\cdot 0688\ 862$
$\cdot 542\ 836$	$\cdot 2163\ 187$	$\cdot 1748\ 771$	$\cdot 1397\ 108$	$\cdot 1103\ 630$	$\cdot 0862\ 468$
$\cdot 922\ 573$	$\cdot 2511\ 781$	$\cdot 2062\ 285^-$	$\cdot 1673\ 791$	$\cdot 1343\ 571$	$\cdot 1067\ 192$
$\cdot 126\ 011$	$\cdot 2888\ 920$	$\cdot 2407\ 687$	$\cdot 1984\ 202$	$\cdot 1617\ 695^-$	$\cdot 1305\ 367$
$\cdot 449\ 559$	$\cdot 3291\ 986$	$\cdot 2783\ 478$	$\cdot 2328\ 001$	$\cdot 1926\ 767$	$\cdot 1578\ 740$
$\cdot 888\ 929$	$\cdot 3717\ 500^-$	$\cdot 3187\ 213$	$\cdot 2703\ 894$	$\cdot 2270\ 665^+$	$\cdot 1888\ 293$
$\cdot 939\ 239$	$\cdot 4161\ 185^+$	$\cdot 3615\ 502$	$\cdot 3109\ 576$	$\cdot 2648\ 263$	$\cdot 2234\ 084$
$\cdot 95\ 156$	$\cdot 4618\ 066$	$\cdot 4064\ 059$	$\cdot 3541\ 710$	$\cdot 3057\ 350^-$	$\cdot 2615\ 108$
$\cdot 51\ 065^+$	$\cdot 5082\ 609$	$\cdot 5457\ 796$	$\cdot 3995\ 968$	$\cdot 3494\ 599$	$\cdot 3020\ 108$
$\cdot 01\ 258$	$\cdot 5548\ 002$	$\cdot 5900\ 265^+$			

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71 \text{ to } .95$ $q = 13$

	$p = 19$	$p = 20$	$p = 21$	$p = 22$	$p =$
$B(p, q) = .3729\ 5481 \times \frac{1}{10^8}$	$.2214\ 4192 \times \frac{1}{10^8}$	$.1342\ 0722 \times \frac{1}{10^8}$	$.8289\ 2697 \times \frac{1}{10^{10}}$	$.5210$	
$\cdot 71$	$\cdot 9146\ 376$	$\cdot 8930\ 267$	$\cdot 8684\ 767$	$\cdot 8410\ 859$	$\cdot 8110$
$\cdot 72$	$\cdot 9330\ 105^-$	$\cdot 9151\ 472$	$\cdot 8945\ 686$	$\cdot 8712\ 855^-$	$\cdot 8453$
$\cdot 73$	$\cdot 9483\ 818$	$\cdot 9339\ 123$	$\cdot 9170\ 119$	$\cdot 8976\ 248$	$\cdot 8757$
$\cdot 74$	$\cdot 9609\ 965^+$	$\cdot 9495\ 244$	$\cdot 9359\ 413$	$\cdot 9201\ 461$	$\cdot 9020$
$\cdot 75$	$\cdot 9711\ 402$	$\cdot 9622\ 487$	$\cdot 9515\ 789$	$\cdot 9390\ 038$	$\cdot 9244$
$\cdot 76$	$\cdot 9791\ 221$	$\cdot 9723\ 955^+$	$\cdot 9642\ 160$	$\cdot 9544\ 473$	$\cdot 9429$
$\cdot 77$	$\cdot 9852\ 595^+$	$\cdot 9803\ 007$	$\cdot 9741\ 915^-$	$\cdot 9667\ 993$	$\cdot 9580$
$\cdot 78$	$\cdot 9898\ 633$	$\cdot 9863\ 080$	$\cdot 9818\ 709$	$\cdot 9764\ 323$	$\cdot 9698$
$\cdot 79$	$\cdot 9932\ 261$	$\cdot 9907\ 523$	$\cdot 9876\ 255^-$	$\cdot 9837\ 438$	$\cdot 9790$
$\cdot 80$	$\cdot 9956\ 125^+$	$\cdot 9939\ 465^-$	$\cdot 9918\ 139$	$\cdot 9891\ 330$	$\cdot 9858$
$\cdot 81$	$\cdot 9972\ 540$	$\cdot 9961\ 711$	$\cdot 9947\ 676$	$\cdot 9929\ 812$	$\cdot 9907$
$\cdot 82$	$\cdot 9983\ 451$	$\cdot 9976\ 681$	$\cdot 9967\ 799$	$\cdot 9956\ 353$	$\cdot 9941$
$\cdot 83$	$\cdot 9990\ 436$	$\cdot 9986\ 382$	$\cdot 9980\ 998$	$\cdot 9973\ 975^+$	$\cdot 9964$
$\cdot 84$	$\cdot 9994\ 725^+$	$\cdot 9992\ 411$	$\cdot 9989\ 300$	$\cdot 9985\ 194$	$\cdot 9979$
$\cdot 85$	$\cdot 9997\ 240$	$\cdot 9995\ 988$	$\cdot 9994\ 284$	$\cdot 9992\ 009$	$\cdot 9989$
$\cdot 86$	$\cdot 9998\ 639$	$\cdot 9998\ 001$	$\cdot 9997\ 124$	$\cdot 9995\ 938$	$\cdot 9994$
$\cdot 87$	$\cdot 9999\ 373$	$\cdot 9999\ 070$	$\cdot 9998\ 648$	$\cdot 9998\ 071$	$\cdot 9997$
$\cdot 88$	$\cdot 9999\ 733$	$\cdot 9999\ 600$	$\cdot 9999\ 413$	$\cdot 9999\ 154$	$\cdot 9998$
$\cdot 89$	$\cdot 9999\ 896$	$\cdot 9999\ 843$	$\cdot 9999\ 767$	$\cdot 9999\ 661$	$\cdot 9999$
$\cdot 90$	$\cdot 9999\ 964$	$\cdot 9999\ 945^-$	$\cdot 9999\ 917$	$\cdot 9999\ 879$	$\cdot 9999$
$\cdot 91$	$\cdot 9999\ 989$	$\cdot 9999\ 983$	$\cdot 9999\ 974$	$\cdot 9999\ 962$	$\cdot 9999$
$\cdot 92$	$\cdot 9999\ 997$	$\cdot 9999\ 996$	$\cdot 9999\ 993$	$\cdot 9999\ 990$	$\cdot 9999$
$\cdot 93$	$\cdot 9999\ 999$	$\cdot 9999\ 999$	$\cdot 9999\ 999$	$\cdot 9999\ 998$	$\cdot 9999$
$\cdot 94$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$1\cdot 0000\ 000$	$\cdot 9999$
$\cdot 95$					$1\cdot 0000$

TABLES OF THE INCOMPLETE β -FUNCTION

to .96

$q = 13$

$p = 25$

$p = 25$	$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$
$\cdot 2159\ 2641 \times \frac{1}{100}$	$\cdot 1420\ 5685 \times \frac{1}{100}$	$\cdot 9470\ 4565 \times \frac{1}{100}$	$\cdot 6392\ 5581 \times \frac{1}{100}$	$\cdot 4365\ 6495 \times \frac{1}{100}$	$\cdot 3014\ 3770 \times \frac{1}{100}$
.0000 001					
.0000 001	.0000 001				
.0000 003	.0000 001				
.0000 007	.0000 003	.0000 001			
.0000 014	.0000 006	.0000 002	.0000 001		
.0000 027	.0000 012	.0000 005 ⁺	.0000 002	.0000 001	
.0000 052	.0000 023	.0000 010	.0000 005 ⁻	.0000 002	.0000 001
.0000 098	.0000 045 ⁺	.0000 021	.0000 009	.0000 004	.0000 002
.0000 178	.0000 085 ⁺	.0000 040	.0000 019	.0000 009	.0000 004
.0000 318	.0000 156	.0000 076	.0000 037	.0000 017	.0000 008
.0000 554	.0000 280	.0000 140	.0000 069	.0000 034	.0000 017
.0000 943	.0000 490	.0000 252	.0000 128	.0000 065 ⁻	.0000 032
.0001 570	.0000 839	.0000 443	.0000 232	.0000 120	.0000 062
.0002 562	.0001 405 ⁻	.0000 762	.0000 409	.0000 218	.0000 115 ⁻
.0004 097	.0002 304	.0001 282	.0000 706	.0000 385 ⁺	.0000 208
.0006 429	.0003 705 ⁺	.0002 113	.0001 193	.0000 667	.0000 370
.0009 907	.0005 848	.0003 415 ⁺	.0001 975 ⁻	.0001 131	.0000 642
.0014 999	.0009 062	.0005 418	.0003 207	.0001 881	.0001 093
.0022 328	.0013 800	.0008 441	.0005 112	.0003 067	.0001 824
.0032 698	.0020 661	.0012 921	.0008 001	.0004 909	.0002 985 ⁺
.0047 134	.0030 432	.0019 447	.0012 306	.0007 716	.0004 796
.0066 911	.0044 117	.0028 793	.0018 610	.0011 919	.0007 567
.0093 584	.0062 979	.0041 956	.0027 684	.0018 101	.0011 734
.0129 014	.0088 572	.0060 201	.0040 530	.0027 041	.0017 888
.0175 375 ⁻	.0122 765 ⁻	.0085 088	.0058 421	.0039 754	.0026 823
.0235 155 ⁺	.0167 762	.0118 514	.0082 945 ⁺	.0057 539	.0039 579
.0311 130	.0226 103	.0162 725 ⁺	.0116 037	.0082 021	.0057 494
.0406 317	.0300 642	.0220 328	.0160 004	.0115 192	.0082 247
.0523 900	.0394 503	.0294 270	.0217 537	.0159 438	.0115 905 ⁻
.0667 127	.0511 010	.0387 797	.0291 692	.0217 553	.0160 952
.0839 179	.0653 576	.0504 380	.0385 852	.0292 723	.0220 307
.1043 012	.0825 572	.0647 605 ⁺	.0503 650 ⁺	.0388 486	.0297 308
.1281 177	.1030 153	.0821 030	.0648 853	.0508 651	.0395 668
.1555 630	.1270 072	.1028 006	.0825 209	.0657 177	.0519 391
.1867 536	.1547 467	.1271 468	.1036 256	.0838 006	.0672 638
.2217 090	.1863 650 ⁺	.1553 711	.1285 097	.1054 856	.0859 548
.2603 356	.2218 906	.1876 154	.1574 152	.1310 978	.1084 013
.3024 157	.2612 312	.2239 118	.1904 901	.1608 881	.1349 404
.3476 011	.3041 610	.2641 628	.2277 643	.1950 058	.1658 280
.3954 147	.3503 137	.3081 269	.2691 276	.2334 710	.2012 080
.4452 586	.3991 828	.3554 108	.3143 137	.2761 522	.2410 831
.4964 311	.4501 314	.4054 699	.3628 927	.3227 484	.2852 897
.5481 513	.5024 103	.4576 193	.4142 716	.3727 817	.3334 806
.5995 897	.5551 852	.5110 540	.4677 074	.4255 992	.3851 172
.6499 050 ⁺	.6075 716	.5648 800	.5223 306	.4803 891	.4394 745 ⁻
.6982 828	.6586 750 ⁻	.6181 531	.5771 809	.5362 088	.4956 605 ⁻
.7439 748	.7076 347	.6699 248	.6312 512	.5920 251	.5526 502
.7863 350 ⁻	.7536 671	.7192 904	.6835 387	.6467 655 ⁻	.6093 329
.8248 500 ⁻	.7961 055 ⁻	.7654 273	.7282 171	.6920 171	.6556 171

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .32$ to $.96$ $q = 13$

$p = 31$	$p = 32$	$p = 33$	$p = 34$	$p = 35$
$B(p, q) = .2103\ 0537 \times \frac{1}{10^{11}}$	$.1481\ 6969 \times \frac{1}{10^{11}}$	$.1053\ 6512 \times \frac{1}{10^{11}}$	$.7558\ 8018 \times \frac{1}{10^{11}}$	$.5468\ 0$
.32	.0000 001			
.33	.0000 002	.0000 001		
.34	.0000 004	.0000 002	.0000 001	
.35	.0000 008	.0000 004	.0000 002	.0000 001
.36	.0000 016	.0000 008	.0000 004	.0000 002
.37	.0000 031	.0000 016	.0000 008	.0000 004
.38	.0000 060	.0000 031	.0000 016	.0000 008
.39	.0000 112	.0000 059	.0000 031	.0000 016
.40	.0000 203	.0000 111	.0000 060	.0000 032
.41	.0000 361	.0000 202	.0000 112	.0000 062
.42	.0000 630	.0000 360	.0000 204	.0000 115 ⁺
.43	.0001 075 ⁺	.0000 629	.0000 365 ⁺	.0000 211
.44	.0001 800	.0001 077	.0000 640	.0000 377
.45	.0002 956	.0001 808	.0001 097	.0000 661
.46	.0004 765 ⁻	.0002 977	.0001 846	.0001 136
.47	.0007 544	.0004 812	.0003 047	.0001 916
.48	.0011 736	.0007 641	.0004 938	.0003 169
.49	.0017 952	.0011 922	.0007 860	.0005 145 ⁺
.50	.0027 008	.0018 289	.0012 294	.0008 207
.51	.0039 982	.0027 594	.0018 907	.0012 865 ⁻
.52	.0058 263	.0040 964	.0028 595 ⁻	.0019 824
.53	.0083 603	.0059 855 ⁺	.0042 550 ⁻	.0030 042
.54	.0118 162	.0086 110	.0062 312	.0044 788
.55	.0164 547	.0122 007	.0089 837	.0065 709
.56	.0225 824	.0170 298	.0127 542	.0094 892
.57	.0305 507	.0234 222	.0178 353	.0134 927
.58	.0407 508	.0317 497	.0245 713	.0188 939
.59	.0536 044	.0424 257	.0333 570	.0260 608
.60	.0695 490	.0558 951	.0446 306	.0354 143
.61	.0890 185 ⁺	.0726 182	.0588 624	.0474 201
.62	.1124 178	.0930 484	.0765 359	.0625 754
.63	.1400 933	.1176 044	.0981 235 ⁻	.0813 875 ⁺
.64	.1723 004	.1466 378	.1240 548	.1043 460
.65	.2091 702	.1803 971	.1546 811	.1318 874
.66	.2506 778	.2189 912	.1902 356	.1643 556
.67	.2966 163	.2623 563	.2307 942	.2019 579
.68	.3465 784	.3102 276	.2762 366	.2447 235 ⁻
.69	.3999 509	.3621 231	.3262 339	.2924 654
.70	.4559 232	.4173 395 ⁻	.3802 027	.3447 540
.71	.5135 116	.4749 663	.4373 365 ⁺	.4009 041
.72	.5716 008	.5339 174	.4966 109	.4599 827
.73	.6289 994	.5929 809	.5568 273	.5208 381
.74	.6845 063	.6508 842	.6166 737	.5821 522
.75	.7369 836	.7063 705 ⁺	.6748 008	.6425 135 ⁺
.76	.7854 286	.7582 295 ⁺	.7299 087	.7005 062
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TABLES OF THE INCOMPLETE β -FUNCTION

$q = 13$

$p =$

$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$9 \times \frac{1}{10^{13}}$	$2 \cdot 167\ 6989 \times \frac{1}{10^{13}}$	$1 \cdot 615\ 1482 \times \frac{1}{10^{13}}$	$1 \cdot 211\ 3612 \times \frac{1}{10^{13}}$	$9 \cdot 142\ 3484 \times \frac{1}{10^{13}}$	$6 \cdot 941\ 4127 \times \frac{1}{10^{13}}$
·0000 001	·0000 001	·0000 001	·0000 001	·0000 001	·0000 001
·0000 001	·0000 001	·0000 001	·0000 001	·0000 001	·0000 001
·0000 002	·0000 001	·0000 001	·0000 001	·0000 001	·0000 001
·0000 005 ⁺	·0000 003	·0000 001	·0000 001	·0000 001	·0000 001
·0000 011	·0000 006	·0000 003	·0000 002	·0000 002	·0000 002
·0000 022	·0000 012	·0000 007	·0000 004	·0000 004	·0000 004
·0000 043	·0000 024	·0000 014	·0000 008	·0000 009	·0000 009
·0000 082	·0000 048	·0000 028	·0000 016	·0000 019	·0000 019
·0000 153	·0000 091	·0000 054	·0000 032	·0000 037	·0000 037
·0000 280	·0000 171	·0000 104	·0000 062	·0000 073	·0000 073
·0000 504	·0000 313	·0000 194	·0000 119	·0000 139	·0000 139
·0000 886	·0000 503	·0000 355 ⁺	·0000 223	·0000 260	·0000 260
·0001 529	·0000 990	·0000 638	·0000 409	·0000 476	·0000 476
·0002 589	·0001 709	·0001 122	·0001 733	·0001 854	·0001 854
·0004 300	·0002 893	·0001 936	·0001 289	·0001 499	·0001 499
·0007 014	·0004 806	·0003 276	·0002 222	·0002 583	·0002 583
·0011 237	·0007 840	·0005 442	·0003 758	·0004 365 ⁻	·0004 365 ⁻
·0017 687	·0012 561	·0008 875 ⁻	·0006 239	·0007 239	·0007 239
·0027 303	·0019 773	·0014 215 ⁻	·0010 168	·0011 786	·0011 786
·0041 617	·0030 587	·0022 366	·0016 274	·0018 843	·0018 843
·0062 243	·0046 513	·0034 583	·0025 587	·0029 588	·0029 588
·0091 502	·0069 544	·0052 556	·0039 526	·0045 645 ⁻	·0045 645 ⁻
·0132 505 ⁺	·0102 254	·0078 518	·0060 004	·0069 188	·0069 188
·0188 675 ⁺	·0147 882	·0115 341	·0089 536	·0103 065 ⁻	·0103 065 ⁻
·0264 377	·0210 390	·0166 619	·0131 340	·0150 895 ⁻	·0150 895 ⁻
·0364 595 ⁺	·0294 485 ⁺	·0236 725 ⁺	·0189 420	·0217 156	·0217 156
·0494 906	·0405 578	·0330 817	·0268 616	·0307 207	·0307 207
·0661 294	·0549 656	·0454 764	·0374 581	·0427 245 ⁻	·0427 245 ⁻
·0869 873	·0733 065 ⁻	·0614 988	·0513 679	·0584 145 ⁻	·0584 145 ⁻
·1126 501	·0962 162	·0818 176	·0692 764	·0785 176	·0785 176
·1436 291	·1242 869	·1070 873	·0918 827	·1037 565 ⁺	·1037 565 ⁺
·1803 046	·1580 107	·1378 948	·1198 509	·1347 906	·1347 906
·2228 658	·1977 169	·1746 959	·1537 469	·1522 216	·1522 216
·2712 530	·2435 064	·2177 448	·1939 669	·2161 224	·2161 224
·3251 088	·2951 926	·2670 253	·2406 607	·2667 370	·2667 370
·3837 475 ⁻	·3522 544	·3221 906	·2936 601	·3236 271	·3236 271
·4401 491	·4138 139	·3825 233	·3524 218	·3860 133	·3860 133
·5109 862	·4786 443	·4469 243	·4159 974	·4526 832	·4526 832
·5766 842	·5452 154	·5139 403	·4830 404	·5220 221	·5220 221
·6415 169	·6117 779	·5818 329	·5518 581	·5920 967	·5920 967
·7037 284	·6764 821	·6486 909	·6205 106	·6607 882	·6607 882
·7616 710	·7375 221	·7125 744	·6869 531	·7259 667	·7259 667
·8139 430	·7932 879	·7716 795 ⁺	·7492 068	·7856 863	·7856 863
·8595 077	·8425 079	·8245 011	·8055 400	·8383 744	·8383 744
·8977 764	·8843 585 ⁻	·8699 703	·8546 325 ⁻	·8760 101	·8760 101
·9286 413	·9185 250 ⁻	·9052 250 ⁻	·8952 250 ⁻	·9250 250 ⁻	·9250 250 ⁻

TABLE I. THE $I_x(p, q)$ FUNCTION

to .97

 $q = 13$

$p = 44$	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$\cdot 4070\ 1920 \times \frac{1}{10^{13}}$	$\cdot 3141\ 9026 \times \frac{1}{10^{13}}$	$\cdot 2437\ 6830 \times \frac{1}{10^{13}}$	$\cdot 1900\ 5664 \times \frac{1}{10^{13}}$	$\cdot 1488\ 7770 \times \frac{1}{10^{13}}$	$\cdot 1171\ 496$
$\cdot 0000\ 001$					
$\cdot 0000\ 001$	$\cdot 0000\ 001$				
$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$		
$\cdot 0000\ 006$	$\cdot 0000\ 004$	$\cdot 0000\ 002$	$\cdot 0000\ 001$	$\cdot 0000\ 001$	
$\cdot 0000\ 013$	$\cdot 0000\ 008$	$\cdot 0000\ 005$	$\cdot 0000\ 003$	$\cdot 0000\ 002$	$\cdot 0000\ 001$
$\cdot 0000\ 027$	$\cdot 0000\ 016$	$\cdot 0000\ 010$	$\cdot 0000\ 006$	$\cdot 0000\ 004$	$\cdot 0000\ 002$
$\cdot 0000\ 054$	$\cdot 0000\ 033$	$\cdot 0000\ 020$	$\cdot 0000\ 012$	$\cdot 0000\ 008$	$\cdot 0000\ 005$
$\cdot 0000\ 104$	$\cdot 0000\ 066$	$\cdot 0000\ 041$	$\cdot 0000\ 026$	$\cdot 0000\ 016$	$\cdot 0000\ 010$
$\cdot 0000\ 198$	$\cdot 0000\ 127$	$\cdot 0000\ 081$	$\cdot 0000\ 052$	$\cdot 0000\ 033$	$\cdot 0000\ 021$
$\cdot 0000\ 369$	$\cdot 0000\ 241$	$\cdot 0000\ 157$	$\cdot 0000\ 102$	$\cdot 0000\ 066$	$\cdot 0000\ 042$
$\cdot 0000\ 673$	$\cdot 0000\ 448$	$\cdot 0000\ 297$	$\cdot 0000\ 196$	$\cdot 0000\ 129$	$\cdot 0000\ 085$
$\cdot 0001\ 203$	$\cdot 0000\ 816$	$\cdot 0000\ 551$	$\cdot 0000\ 370$	$\cdot 0000\ 248$	$\cdot 0000\ 166$
$\cdot 0002\ 107$	$\cdot 0001\ 455$	$\cdot 0001\ 000$	$\cdot 0000\ 685$	$\cdot 0000\ 467$	$\cdot 0000\ 317$
$\cdot 0003\ 619$	$\cdot 0002\ 542$	$\cdot 0001\ 779$	$\cdot 0001\ 239$	$\cdot 0000\ 860$	$\cdot 0000\ 595$
$\cdot 0006\ 098$	$\cdot 0004\ 358$	$\cdot 0003\ 102$	$\cdot 0002\ 199$	$\cdot 0001\ 553$	$\cdot 0001\ 093$
$\cdot 0010\ 082$	$\cdot 0007\ 328$	$\cdot 0005\ 304$	$\cdot 0003\ 824$	$\cdot 0002\ 747$	$\cdot 0001\ 966$
$\cdot 0016\ 361$	$\cdot 0012\ 089$	$\cdot 0008\ 897$	$\cdot 0006\ 522$	$\cdot 0004\ 763$	$\cdot 0003\ 466$
$\cdot 0026\ 066$	$\cdot 0019\ 574$	$\cdot 0014\ 641$	$\cdot 0010\ 908$	$\cdot 0008\ 097$	$\cdot 0005\ 988$
$\cdot 0040\ 778$	$\cdot 0031\ 111$	$\cdot 0023\ 642$	$\cdot 0017\ 897$	$\cdot 0013\ 498$	$\cdot 0010\ 144$
$\cdot 0062\ 651$	$\cdot 0048\ 547$	$\cdot 0037\ 470$	$\cdot 0028\ 811$	$\cdot 0022\ 072$	$\cdot 0016\ 849$
$\cdot 0094\ 544$	$\cdot 0074\ 382$	$\cdot 0058\ 292$	$\cdot 0045\ 512$	$\cdot 0035\ 404$	$\cdot 0027\ 444$
$\cdot 0140\ 148$	$\cdot 0111\ 914$	$\cdot 0089\ 025$	$\cdot 0070\ 554$	$\cdot 0055\ 715$	$\cdot 0043\ 844$
$\cdot 0204\ 090$	$\cdot 0165\ 364$	$\cdot 0133\ 479$	$\cdot 0107\ 348$	$\cdot 0086\ 026$	$\cdot 0068\ 701$
$\cdot 0291\ 982$	$\cdot 0239\ 971$	$\cdot 0196\ 490$	$\cdot 0160\ 307$	$\cdot 0130\ 328$	$\cdot 0105\ 596$
$\cdot 0410\ 392$	$\cdot 0342\ 015$	$\cdot 0283\ 987$	$\cdot 0234\ 965$	$\cdot 0193\ 735$	$\cdot 0159\ 205$
$\cdot 0566\ 695$	$\cdot 0478\ 737$	$\cdot 0402\ 976$	$\cdot 0338\ 019$	$\cdot 0282\ 571$	$\cdot 0235\ 440$
$\cdot 0768\ 774$	$\cdot 0658\ 113$	$\cdot 0561\ 396$	$\cdot 0477\ 251$	$\cdot 0404\ 368$	$\cdot 0341\ 506$
$\cdot 1024\ 546$	$\cdot 0888\ 457$	$\cdot 0767\ 792$	$\cdot 0661\ 291$	$\cdot 0567\ 707$	$\cdot 0485\ 821$
$\cdot 1341\ 299$	$\cdot 1177\ 816$	$\cdot 1030\ 790$	$\cdot 0899\ 169$	$\cdot 0781\ 859$	$\cdot 0677\ 746$
$\cdot 1724\ 875$	$\cdot 1533\ 178$	$\cdot 1358\ 350$	$\cdot 1199\ 636$	$\cdot 1056\ 186$	$\cdot 0927\ 081$
$\cdot 2178\ 734$	$\cdot 1959\ 521$	$\cdot 1756\ 821$	$\cdot 1570\ 250$	$\cdot 1399\ 279$	$\cdot 1243\ 268$
$\cdot 2703\ 003$	$\cdot 2458\ 783$	$\cdot 2229\ 867$	$\cdot 2016\ 278$	$\cdot 1817\ 868$	$\cdot 1634\ 339$
$\cdot 3293\ 637$	$\cdot 3028\ 879$	$\cdot 2777\ 360$	$\cdot 2539\ 510$	$\cdot 2315\ 576$	$\cdot 2105\ 639$
$\cdot 3941\ 844$	$\cdot 3662\ 926$	$\cdot 3394\ 421$	$\cdot 3137\ 123$	$\cdot 2891\ 649$	$\cdot 2658\ 450$
$\cdot 4633\ 934$	$\cdot 4348\ 842$	$\cdot 4070\ 781$	$\cdot 3800\ 821$	$\cdot 3539\ 878$	$\cdot 3288\ 721$
$\cdot 5351\ 726$	$\cdot 5069\ 505$	$\cdot 4790\ 670$	$\cdot 4516\ 442$	$\cdot 4247\ 933$	$\cdot 3986\ 135$
$\cdot 6073\ 578$	$\cdot 5803\ 571$	$\cdot 5533\ 384$	$\cdot 5264\ 254$	$\cdot 4997\ 357$	$\cdot 4733\ 797$
$\cdot 6776\ 026$	$\cdot 6526\ 979$	$\cdot 6274\ 611$	$\cdot 6020\ 049$	$\cdot 5764\ 403$	$\cdot 5508\ 757$
$\cdot 7435\ 886$	$\cdot 7215\ 050$	$\cdot 6988\ 473$	$\cdot 6757\ 068$	$\cdot 6521\ 773$	$\cdot 6283\ 537$
$\cdot 8032\ 560$	$\cdot 7844\ 938$	$\cdot 7650\ 061$	$\cdot 7448\ 575$	$\cdot 7241\ 173$	$\cdot 7028\ 586$
$\cdot 8550\ 200$	$\cdot 8398\ 074$	$\cdot 8238\ 139$	$\cdot 8070\ 763$	$\cdot 7896\ 371$	$\cdot 7715\ 440$
$\cdot 8979\ 358$	$\cdot 8862\ 198$	$\cdot 8737\ 539$	$\cdot 8605\ 510$	$\cdot 8466\ 288$	$\cdot 8320\ 106$
$\cdot 9317\ 785$	$\cdot 9232\ 563$	$\cdot 9140\ 807$	$\cdot 9042\ 469$	$\cdot 8937\ 540$	$\cdot 8826\ 053$
$\cdot 9570\ 196$	$\cdot 9512\ 049$	$\cdot 9448\ 707$	$\cdot 9380\ 023$	$\cdot 9305\ 872$	$\cdot 9226\ 162$

TABLES OF THE INCOMPLETE β -FUNCTION

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$q = 14$

$p = 14$ t

$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$	$p = 19$
= .3561 0481 $\times \frac{1}{10^8}$.1780 5241 $\times \frac{1}{10^8}$.9209 6072 $\times \frac{1}{10^9}$.4911 7905 $\times \frac{1}{10^8}$.2693 5625 $\times \frac{1}{10^8}$.1515 1289 $\times \frac{1}{10^8}$
.0000 001					
.0000 002					
.0000 006	.0000 001				
.0000 015 ⁻	.0000 004	.0000 001			
.0000 036	.0000 009	.0000 002	.0000 001		
.0000 083	.0000 023	.0000 006	.0000 002		
.0000 179	.0000 053	.0000 015 ⁺	.0000 004	.0000 001	
.0000 362	.0000 114	.0000 035 ⁻	.0000 010	.0000 003	.0000 001
.0000 699	.0000 232	.0000 075 ⁻	.0000 023	.0000 007	.0000 002
.0001 289	.0000 451	.0000 153	.0000 051	.0000 016	.0000 005 ⁺
.0002 285 ⁺	.0000 840	.0000 300	.0000 105 ⁻	.0000 036	.0000 012
.0003 905 ⁻	.0001 505 ⁺	.0000 565 ⁻	.0000 207	.0000 074	.0000 026
.0006 454	.0002 603	.0001 022	.0000 391	.0000 146	.0000 054
.0010 346	.0004 357	.0001 786	.0000 714	.0000 279	.0000 107
.0016 129	.0007 079	.0003 024	.0001 261	.0000 514	.0000 205 ⁺
.0024 500 ⁻	.0011 186	.0004 972	.0002 157	.0000 915 ⁻	.0000 380
.0036 333	.0017 227	.0007 954	.0003 585 ⁻	.0001 580	.0000 682
.0052 692	.0025 906	.0012 406	.0005 799	.0002 651	.0001 188
.0074 840	.0038 098	.0018 895 ⁻	.0009 149	.0004 333	.0002 011
.0104 244	.0054 872	.0028 145 ⁺	.0014 097	.0006 907	.0003 317
.0142 565 ⁺	.0077 498	.0041 060	.0021 247	.0010 758	.0005 338
.0191 640	.0107 453	.0058 737	.0031 364	.0016 390	.0008 395 ⁺
.0253 448	.0146 415 ⁻	.0082 480	.0045 398	.0024 458	.0012 918
.0330 071	.0196 246	.0113 810	.0064 503	.0035 789	.0019 470
.0423 632	.0258 962	.0154 452	.0090 047	.0051 404	.0028 777
.0536 230	.0336 688	.0206 321	.0123 619	.0072 539	.0041 748
.0669 863	.0431 604	.0271 494	.0167 023	.0100 652	.0059 503
.0826 346	.0545 876	.0352 165 ⁺	.0222 258	.0137 436	.0083 385 ⁺
.1007 226	.0681 578	.0450 585 ⁻	.0291 489	.0184 800	.0114 979
.1213 695 ⁻	.0840 603	.0568 991	.0376 996	.0244 858	.0156 106
.1446 518	.1024 577	.0709 528	.0481 117	.0319 886	.0208 816
.1705 958	.1234 768	.0874 151	.0606 167	.0412 272	.0275 361
.1991 729	.1472 002	.1064 535 ⁻	.0754 351	.0524 450 ⁻	.0358 154
.2302 954	.1736 584	.1281 977	.0927 668	.0658 810	.0459 706
.2638 151	.2028 244	.1527 306	.1127 809	.0817 611	.0582 549
.2995 240	.2346 087	.1800 799	.1356 048	.1002 864	.0729 146
.3371 573	.2688 580	.2102 116	.1613 152	.1216 229	.0901 777
.3763 986	.3053 548	.2430 256	.1899 290	.1458 901	.1102 430
.4168 872	.3438 207	.2783 531	.2213 963	.1731 506	.1332 674
.4582 276	.3839 219	.3159 570	.2555 957	.2034 010	.1593 544
.5000 000 ^e	.4252 770	.3555 356	.2923 324	.2365 648	.1885 428

.5417 724	.4674 668	.3967 279	.3313 385 ⁺	.2724 881	.2207 979
.5831 128	.5100 463	.4391 231	.3722 780	.3109 378	.2560 042
.6236 014	.5525 576	.4822 716	.4147 531	.3516 024	.2922 618

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .71$ to $.93$ $q = 14$

	$p = 14$	$p = 15$	$p = 16$	$p = 17$	$p = 18$
$B(p, q) = .3561\ 0481 \times \frac{1}{10^8}$	$.1780\ 5241 \times \frac{1}{10^8}$	$.9209\ 6072 \times \frac{1}{10^8}$	$.4911\ 7905 \times \frac{1}{10^8}$	$.2693\ 562$	
x					
.71	.9895 756	.9846 383	.9780 949	.9696 742	.9591 237
.72	.9925 160	.9888 418	.9839 037	.9774 595 ⁻	.9692 715
.73	.9947 308	.9920 522	.9884 022	.9835 727	.9773 513
.74	.9963 667	.9944 561	.9918 170	.9882 772	.9836 547
.75	.9975 500 ⁺	.9962 186	.9943 546	.9918 208	.9884 672
.76	.9983 871	.9974 822	.9961 983	.9944 297	.9920 578
.77	.9989 654	.9983 665 ⁻	.9975 056	.9963 043	.9946 718
.78	.9993 546	.9989 696	.9984 089	.9976 163	.9965 252
.79	.9996 095 ⁺	.9993 696	.9990 157	.9985 090	.9978 026
.80	.9997 715 ⁻	.9996 269	.9994 111	.9990 981	.9986 563
.81	.9998 711	.9997 872	.9996 604	.9994 742	.9992 080
.82	.9999 301	.9998 834	.9998 119	.9997 056	.9995 518
.83	.9999 638	.9999 389	.9999 004	.9998 424	.9997 575
.84	.9999 821	.9999 696	.9999 498	.9999 198	.9998 752
.85	.9999 917	.9999 857	.9999 761	.9999 614	.9999 393
.86	.9999 964	.9999 937	.9999 893	.9999 826	.9999 723
.87	.9999 985 ⁺	.9999 974	.9999 956	.9999 927	.9999 883
.88	.9999 994	.9999 990	.9999 983	.9999 972	.9999 954
.89	.9999 998	.9999 997	.9999 994	.9999 990	.9999 984
.90	.9999 999	.9999 999	.9999 998	.9999 997	.9999 995
.91	1.0000 000	1.0000 000	1.0000 000	.9999 999	.9999 999
.92				1.0000 000	1.0000 000
.93					

TABLES OF THE INCOMPLETE β -FUNCTION

18 to 80

$q = 14$

$p = 20$

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$
$\gamma, q) = .8723\ 4696 \times 10^{10}$		$.5131\ 4527 \times 10^{10}$	$.3078\ 8716 \times 10^{10}$	$.1881\ 5327 \times 10^{10}$	$.1169\ 6014 \times 10^{10}$	$.7386\ 9561$
18	.0000 001					
19	.0000 002					
20	.0000 004	.0000 001				
21	.0000 009	.0000 003	.0000 001			
22	.0000 019	.0000 007	.0000 002	.0000 001		
23	.0000 040	.0000 015 ⁻	.0000 005 ⁺	.0000 002	.0000 001	
24	.0000 080	.0000 031	.0000 012	.0000 004	.0000 002	.0000 001
25	.0000 155 ⁻	.0000 062	.0000 024	.0000 009	.0000 004	.0000 001
26	.0000 289	.0000 120	.0000 049	.0000 020	.0000 008	.0000 003
27	.0000 522	.0000 225 ⁺	.0000 096	.0000 040	.0000 017	.0000 007
28	.0000 916	.0000 410	.0000 180	.0000 078	.0000 033	.0000 014
29	.0001 563	.0000 724	.0000 330	.0000 148	.0000 065 ⁺	.0000 029
30	.0002 600	.0001 244	.0000 586	.0000 272	.0000 124	.0000 056
31	.0004 221	.0002 086	.0001 014	.0000 486	.0000 230	.0000 107
32	.0006 698	.0003 414	.0001 712	.0000 846	.0000 412	.0000 198
33	.0010 400	.0005 461	.0002 823	.0001 437	.0000 722	.0000 358
34	.0015 820	.0008 551	.0004 549	.0002 385 ⁻	.0001 233	.0000 629
35	.0023 598	.0013 117	.0007 177	.0003 870	.0002 058	.0001 080
36	.0034 553	.0019 733	.0011 095 ⁺	.0006 148	.0003 360	.0001 813
37	.0049 703	.0029 141	.0016 823	.0009 572	.0005 372	.0002 977
38	.0070 293	.0042 275 ⁺	.0025 038	.0014 617	.0008 418	.0004 787
39	.0097 809	.0060 296	.0036 608	.0021 911	.0012 940	.0007 546
40	.0133 990	.0084 604	.0052 621	.0032 269	.0019 526	.0011 668
41	.0180 821	.0116 864	.0074 409	.0046 717	.0028 946	.0017 713
42	.0240 523	.0159 004	.0103 571	.0066 531	.0042 182	.0026 416
43	.0315 513	.0213 207	.0141 983	.0093 260	.0060 467	.0038 728
44	.0408 357	.0281 893	.0191 802	.0128 739	.0085 307	.0055 846
45	.0521 696	.0367 665 ⁻	.0255 442	.0175 101	.0118 513	.0079 255 ⁻
46	.0658 160	.0473 254	.0335 543	.0234 764	.0162 203	.0110 745 ⁺
47	.0820 255 ⁺	.0601 428	.0434 912	.0310 403	.0218 807	.0152 439
48	.1010 250 ⁺	.0754 891	.0556 440	.0404 895 ⁺	.0291 039	.0206 786
49	.1230 043	.0936 153	.0703 001	.0521 247	.0381 851	.0276 548
50	.1481 032	.1147 405 ⁺	.0877 326	.0662 491	.0494 359	.0364 757
51	.1763 987	.1390 367	.1081 864	.0831 556	.0631 745 ⁺	.0474 644
52	.2078 939	.1666 153	.1318 627	.1031 128	.0797 128	.0609 539
53	.2425 091	.1975 137	.1589 033	.1263 478	.0993 409	.0772 739
54	.2800 751	.2316 840	.1893 764	.1530 302	.1223 099	.0967 351
55	.3203 315 ⁺	.2689 851	.2232 624	.1832 550 ⁺	.1488 139	.1196 107
56	.3629 279	.3091 779	.2604 445 ⁻	.2170 275 ⁻	.1789 715 ⁺	.1461 166
57	.4074 304	.3519 249	.3007 012	.2542 507	.2128 087	.1703 916
58	.4533 326	.3967 958	.3437 051	.2947 169	.2502 441	.2104 781
59	.5000 698	.4432 767	.3890 259	.3381 041	.2910 789	.2483 055 ⁺
60	.5470 384	.4907 854	.4361 396	.3839 778	.3349 910	.2896 782
61	.5936 168	.5386 903	.4844 438	.4318 001	.3815 368	.3342 683
62	.6401 882	.5861 000	.5344 000	.4818 000	.4318 000	.3842 000

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .81$ to $.94$ $q = 14$

	$p = 20$	$p = 21$	$p = 22$	$p = 23$	$p = 24$
$B(p, q) = .8723\ 4696 \times \frac{1}{10^{10}}$		$.5131\ 4527 \times \frac{1}{10^{10}}$	$.3078\ 8716 \times \frac{1}{10^{10}}$	$.1881\ 5327 \times \frac{1}{10^{10}}$	$.1169\ 6000 \times \frac{1}{10^{10}}$
x					
.81	.9983 303	.9976 534	.9967 657	.9956 217	.9941 711
.82	.9990 346	.9986 288	.9980 899	.9973 870	.9964 841
.83	.9994 665	.9992 341	.9989 219	.9985 096	.9979 741
.84	.9997 196	.9995 933	.9994 215	.9991 919	.9988 900
.85	.9998 608	.9997 959	.9997 067	.9995 860	.9994 251
.86	.9999 352	.9999 040	.9998 606	.9998 011	.9997 211
.87	.9999 719	.9999 580	.9999 384	.9999 113	.9998 741
.88	.9999 888	.9999 831	.9999 750 ⁺	.9999 636	.9999 471
.89	.9999 960	.9999 939	.9999 908	.9999 865 ⁺	.9999 800
.90	.9999 987	.9999 980	.9999 970	.9999 956	.9999 931
.91	.9999 996	.9999 994	.9999 992	.9999 987	.9999 981
.92	.9999 999	.9999 999	.9999 998	.9999 997	.9999 996
.93	1.0000 000	1.0000 000	1.0000 000	.9999 999	.9999 999
.94				1.0000 000	1.0000 000

TABLES OF THE INCOMPLETE β -FUNCTION

25 to 95

$q = 14$

$p =$

$p = 26$	$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$
$(p, q) = .4735\ 2283 \times \frac{1}{10^{11}}$	$.3077\ 8984 \times \frac{1}{10^{11}}$	$.2026\ 9087 \times \frac{1}{10^{11}}$	$.1351\ 2725 \times \frac{1}{10^{11}}$	$.9113\ 2328 \times \frac{1}{10^{11}}$	$.6213\ 56$
x					
.25	.0000 00I				
.26	.0000 00I				
.27	.0000 003				
.28	.0000 006	.0000 00I			
.29	.0000 012	.0000 002	.0000 00I		
.30	.0000 025 ⁺	.0000 005 ⁻	.0000 002		
.31	.0000 049	.0000 01I	.0000 004	.0000 00I	.0000 00
.32	.0000 094	.0000 02I	.0000 009	.0000 004	.0000 00
.33	.0000 175 ⁺	.0000 04I	.0000 019	.0000 009	.0000 00
.34	.0000 317	.0000 078	.0000 038	.0000 018	.0000 00
.35	.0000 560	.0000 146	.0000 073	.0000 036	.0000 01
.36	.0000 967	.0000 266	.0000 137	.0000 070	.0000 03
.37	.0001 630	.0000 473	.0000 25I	.0000 132	.0000 06
.38	.0002 690	.0000 822	.0000 447	.0000 24I	.0000 12
.39	.0004 348	.0001 397	.0000 780	.0000 43I	.0000 23
.40	.0006 890	.0002 325 ⁺	.0001 330	.0000 754	.0000 42
.41	.0010 712	.0003 792	.0002 222	.0001 290	.0000 74
.42	.0016 33I	.0006 064	.0003 638	.0002 162	.0001 27
.43	.0024 519	.0009 516	.0005 840	.0003 55I	.0002 14
.44	.0036 143	.0014 662	.0009 200	.0005 720	.0003 52
.45	.0052 402	.0022 193	.0014 23I	.0009 042	.0005 69
.46	.0074 766	.0033 022	.0021 626	.0014 035 ⁻	.0009 02
.47	.0105 025 ⁺	.0048 324	.0032 306	.0021 403	.0014 05
.48	.0145 315 ⁻	.0069 582	.0047 46I	.0032 083	.0021 50
.49	.0198 119	.0098 626	.0068 602	.0047 294	.0032 33
.50	.0266 260	.0137 666	.0097 602	.0068 59I	.0047 79
.51	.0352 839	.0189 302	.0136 734	.0097 906	.0069 52
.52	.0461 268	.0256 523	.0188 684	.0137 594	.0099 51
.53	.0594 968	.0342 672	.0256 552	.0190 448	.0140 23
.54	.0757 434	.0451 375 ⁻	.0343 817	.0259 699	.0194 59
.55	.0951 908	.0750 553	.0586 438	.0348 985 ⁻	.0265 98
.56	.1181 504	.0946 589	.0751 696	.0462 270	.0358 23
.57	.1448 398	.1178 630	.0950 826	.0603 73I	.0475 49
.58	.1754 203	.1449 200	.1187 124	.0777 58I	.0622 15
.59	.2099 464	.1759 986	.1463 256	.0987 855 ⁻	.0802 61
.60	.2483 529	.2111 602	.1781 000	.1238 145 ⁻	.1021 08
.61	.2904 410	.2503 390	.2140 987	.1817 284	.1281 27
.62	.3358 70I	.2933 259	.2542 483	.2187 715 ⁻	.1586 06
.63	.3841 576	.3397 595 ⁻	.2983 213	.2600 945 ⁺	.1937 20
.64	.4346 872	.3891 255 ⁺	.3459 262	.3054 424	.2334 95
.65	.4867 268	.4407 662	.3905 078	.3543 834	.2777 82
.66	.5394 543	.4938 996	.4493 573	.4063 103	.3262 38
.67	.5919 923	.5476 492	.5036 346	.4604 53I	.3783 13
.68	.6434 477	.6010 817	.5584 019	.5159 050 ⁺	.4332 61
.69	.6929 549	.6532 517	.6126 66I	.5716 603	.4901 55
.70	.7397 188	.7032 49I	.6654 286	.6266 627	.5470 30
.71	.7830 545 ⁻	.7502 469	.7157 38I	.6798 613	.6054 27
.72	.8224 204	.7935 440	.7627 425 ⁺	.7202 680	.6651 67

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .32$ to $.96$ $q = 14$

	$p = 32$	$p = 33$	$p = 34$	$p = 35$	$p = 36$
$B(p, q) = .4280\ 4578 \times \frac{x}{10^{14}}$		$.2977\ 7098 \times \frac{x}{10^{14}}$	$.2090\ 7324 \times \frac{x}{10^{14}}$	$.1480\ 9355 \times \frac{x}{10^{14}}$	$.1057\ 8111 \times \frac{x}{10^{14}}$
x					
.32	.0000 001				
.33	.0000 002	.0000 001			
.34	.0000 004	.0000 002	.0000 001		
.35	.0000 009	.0000 004	.0000 002	.0000 001	
.36	.0000 018	.0000 009	.0000 004	.0000 002	.0000 001
.37	.0000 035 ⁺	.0000 018	.0000 009	.0000 005 ⁻	.0000 002
.38	.0000 068	.0000 036	.0000 019	.0000 010	.0000 005
.39	.0000 128	.0000 069	.0000 037	.0000 020	.0000 010
.40	.0000 236	.0000 130	.0000 071	.0000 039	.0000 020
.41	.0000 423	.0000 240	.0000 135 ⁻	.0000 075 ⁻	.0000 040
.42	.0000 744	.0000 431	.0000 248	.0000 141	.0000 080
.43	.0001 279	.0000 758	.0000 446	.0000 260	.0000 150
.44	.0002 154	.0001 306	.0000 786	.0000 469	.0000 270
.45	.0003 557	.0002 204	.0001 355 ⁺	.0000 828	.0000 500
.46	.0005 761	.0003 647	.0002 291	.0001 429	.0000 880
.47	.0009 157	.0005 919	.0003 797	.0002 419	.0001 530
.48	.0014 294	.0009 429	.0006 174	.0004 013	.0002 590
.49	.0021 922	.0014 750 ⁺	.0009 852	.0006 534	.0004 300
.50	.0033 044	.0022 669	.0015 438	.0010 441	.0007 010
.51	.0048 978	.0034 243	.0023 768	.0016 383	.0011 210
.52	.0071 411	.0050 859	.0035 962	.0025 254	.0017 610
.53	.0102 454	.0074 299	.0053 498	.0038 259	.0027 180
.54	.0144 690	.0106 797	.0078 273	.0056 981	.0041 210
.55	.0201 197	.0151 085 ⁻	.0112 666	.0083 456	.0061 420
.56	.0275 542	.0210 422	.0159 589	.0120 238	.0090 010
.57	.0371 748	.0288 588	.0222 514	.0170 451	.0129 750
.58	.0494 196	.0389 833	.0305 457	.0237 808	.0183 990
.59	.0647 486	.0518 781	.0412 930	.0326 599	.0256 740
.60	.0836 230	.0680 261	.0549 813	.0441 619	.0352 590
.61	.1064 786	.0879 083	.0721 179	.0588 029	.0476 630
.62	.1336 944	.1119 742	.0932 026	.0771 143	.0634 340
.63	.1655 576	.1406 070	.1186 958	.0996 137	.0831 260
.64	.2022 268	.1740 849	.1489 789	.1267 674	.1072 720
.65	.2436 979	.2125 420	.1843 129	.1589 482	.1363 370
.66	.2897 742	.2559 311	.2247 954	.1963 887	.1706 760
.67	.3400 475 ⁺	.3039 939	.2703 220	.2391 359	.2104 800
.68	.3938 904	.3562 421	.3205 562	.2870 114	.2557 280
.69	.4504 657	.4119 538	.3749 124	.3395 815 ⁻	.3061 480
.70	.5087 531	.4701 880	.4325 578	.3961 450 ⁺	.3611 880
.71	.5675 935 ⁻	.5298 190	.4924 336	.4557 410	.4200 120
.72	.6257 489	.5895 903	.5533 001	.5171 808	.4815 150
.73	.6819 743	.6481 846	.6138 010	.5791 040	.5443 670
.74	.7350 946	.7043 052	.6725 454	.6400 570	.6070 860
.75	.7840 807	.7567 607	.7281 989	.6985 870	.6681 290
.76	.8281 153	.8015 457	.7755 763	.7538 266	.7298 266

TABLES OF THE INCOMPLETE β -FUNCTION

to .96

$q = 14$

$p = 38$

$p = 38$	$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$
$\gamma = .5525\ 5071 \times \frac{1}{10^{13}}$	$.4037\ 8706 \times \frac{1}{10^{13}}$	$.2971\ 2632 \times \frac{1}{10^{13}}$	$.2200\ 9357 \times \frac{1}{10^{13}}$	$.1640\ 6976 \times \frac{1}{10^{13}}$	$.1230\ 5232 \times \frac{1}{10^{13}}$
.0000 001					
.0000 001	.0000 001				
.0000 003	.0000 001	.0000 001			
.0000 006	.0000 003	.0000 002	.0000 001		
.0000 012	.0000 007	.0000 004	.0000 002	.0000 001	.0000 001
.0000 025 ⁺	.0000 014	.0000 008	.0000 004	.0000 002	.0000 001
.0000 050 ⁻	.0000 028	.0000 016	.0000 009	.0000 005 ⁺	.0000 003
.0000 096	.0000 056	.0000 032	.0000 019	.0000 011	.0000 006
.0000 181	.0000 108	.0000 064	.0000 037	.0000 022	.0000 013
.0000 333	.0000 203	.0000 122	.0000 074	.0000 044	.0000 026
.0000 601	.0000 373	.0000 230	.0000 141	.0000 086	.0000 052
.0001 060	.0000 672	.0000 423	.0000 265 ⁺	.0000 165 ⁺	.0000 103
.0001 832	.0001 185 ⁻	.0000 762	.0000 487	.0000 310	.0000 196
.0003 105 ⁺	.0002 048	.0001 343	.0000 876	.0000 568	.0000 367
.0005 161	.0003 469	.0002 319	.0001 542	.0001 020	.0000 671
.0008 415 ⁻	.0005 764	.0003 926	.0002 660	.0001 793	.0001 203
.0013 468	.0009 397	.0006 520	.0004 500 ⁻	.0003 090	.0002 111
.0021 165 ⁺	.0015 036	.0010 622	.0007 465 ⁻	.0005 219	.0003 631
.0032 670	.0023 621	.0016 985 ⁺	.0012 149	.0008 646	.0006 123
.0049 549	.0036 448	.0026 665 ⁺	.0019 406	.0014 053	.0010 127
.0073 857	.0055 251	.0041 111	.0030 431	.0022 414	.0016 429
.0108 222	.0082 304	.0062 261	.0046 858	.0035 091	.0026 155 ⁻
.0155 923	.0120 508	.0092 647	.0070 868	.0053 943	.0040 867
.0220 932	.0173 461	.0135 484	.0105 292	.0081 433	.0062 687
.0307 918	.0245 504	.0194 740	.0153 711	.0120 747	.0094 415 ⁺
.0422 185 ⁻	.0341 703	.0275 171	.0220 515 ⁺	.0175 884	.0139 648
.0569 533	.0467 765 ⁺	.0382 280	.0310 922	.0251 712	.0202 864
.0756 019	.0629 860	.0522 205 ⁻	.0430 913	.0353 960	.0289 467
.0987 618	.0834 331	.0701 483	.0587 067	.0489 116	.0405 741
.1269 775 ⁻	.1087 293	.0926 710	.0786 279	.0664 207	.0558 703
.1606 878	.1394 122	.1204 059	.1035 332	.0886 440	.0755 805 ⁺
.2001 679	.1758 860	.1538 704	.1340 343	.1162 690	.1004 494
.2454 712	.2183 585 ⁻	.1934 147	.1706 099	.1498 854	.1311 593
.2963 780	.2667 797	.2391 545 ⁺	.2135 322	.1899 097	.1682 558
.3523 582	.3207 912	.2909 078	.2627 949	.2365 060	.2120 635 ⁺
.4125 562	.3796 944	.3481 471	.3180 509	.2895 109	.2626 018
.4758 041	.4424 457	.4099 768	.3785 713	.3483 761	.3195 108
.5406 676	.5076 856	.4751 434	.4432 358	.4121 375 ⁺	.3820 018
.6055 240	.5738 041	.5420 842	.5105 625 ⁻	.4794 252	.4488 439
.6686 699	.6390 408	.6090 167	.5787 824	.5485 186	.5183 989
.7284 464	.7016 126	.6740 633	.6459 561	.6174 513	.5887 089
.7833 714	.7598 557	.7353 995 ⁻	.7101 239	.6841 579	.6576 355 ⁺
.8322 602	.8123 652	.7914 091	.7694 733	.7466 495 ⁻	.7230 376
.8743 194	.8581 131	.8408 264	.8225 025 ⁻	.8031 953	.7829 688
.9091 996	.8965 282	.8828 422	.8692 252		

TABLES OF THE INCOMPLETE β -FUNCTION

to .80

$q = 15$

$p = 21$ t

$p = 21$	$p = 22$	$p = 23$	$p = 24$	$p = 25$	$p = 26$
$\cdot 2052\ 5811 \times \frac{1}{10^{16}}$	$\cdot 1197\ 3390 \times \frac{1}{10^{16}}$	$\cdot 7119\ 3127 \times \frac{1}{10^{11}}$	$\cdot 4309\ 0577 \times \frac{1}{10^{11}}$	$\cdot 2651\ 7278 \times \frac{1}{10^{11}}$	$\cdot 1657\ 3299 \times \frac{1}{10^{10}}$
$\cdot 0000\ 001$					
$\cdot 0000\ 003$	$\cdot 0000\ 001$				
$\cdot 0000\ 006$	$\cdot 0000\ 002$	$\cdot 0000\ 001$			
$\cdot 0000\ 013$	$\cdot 0000\ 005^-$	$\cdot 0000\ 002$	$\cdot 0000\ 001$		
$\cdot 0000\ 029$	$\cdot 0000\ 011$	$\cdot 0000\ 004$	$\cdot 0000\ 003$	$\cdot 0000\ 001$	
$\cdot 0000\ 060$	$\cdot 0000\ 023$	$\cdot 0000\ 009$	$\cdot 0000\ 007$	$\cdot 0000\ 003$	$\cdot 0000\ 001$
$\cdot 0000\ 118$	$\cdot 0000\ 048$	$\cdot 0000\ 019$	$\cdot 0000\ 016$	$\cdot 0000\ 006$	$\cdot 0000\ 003$
$\cdot 0000\ 227$	$\cdot 0000\ 095^+$	$\cdot 0000\ 039$	$\cdot 0000\ 033$	$\cdot 0000\ 014$	$\cdot 0000\ 006$
$\cdot 0000\ 420$	$\cdot 0000\ 183$	$\cdot 0000\ 079$	$\cdot 0000\ 067$	$\cdot 0000\ 029$	$\cdot 0000\ 012$
$\cdot 0000\ 754$	$\cdot 0000\ 341$	$\cdot 0000\ 152$	$\cdot 0000\ 129$	$\cdot 0000\ 058$	$\cdot 0000\ 025^+$
$\cdot 0001\ 315^-$	$\cdot 0000\ 615^+$	$\cdot 0000\ 284$	$\cdot 0000\ 241$	$\cdot 0000\ 112$	$\cdot 0000\ 051$
$\cdot 0002\ 232$	$\cdot 0001\ 080$	$\cdot 0000\ 514$			
$\cdot 0003\ 693$	$\cdot 0001\ 845^-$	$\cdot 0000\ 907$	$\cdot 0000\ 440$	$\cdot 0000\ 210$	$\cdot 0000\ 099$
$\cdot 0005\ 966$	$\cdot 0003\ 074$	$\cdot 0001\ 559$	$\cdot 0000\ 779$	$\cdot 0000\ 384$	$\cdot 0000\ 187$
$\cdot 0009\ 419$	$\cdot 0004\ 999$	$\cdot 0002\ 613$	$\cdot 0001\ 346$	$\cdot 0000\ 684$	$\cdot 0000\ 343$
$\cdot 0014\ 553$	$\cdot 0007\ 950^+$	$\cdot 0004\ 277$	$\cdot 0002\ 268$	$\cdot 0001\ 186$	$\cdot 0000\ 613$
$\cdot 0022\ 026$	$\cdot 0012\ 374$	$\cdot 0006\ 846$	$\cdot 0003\ 734$	$\cdot 0002\ 009$	$\cdot 0001\ 067$
$\cdot 0032\ 690$	$\cdot 0018\ 869$	$\cdot 0010\ 728$	$\cdot 0006\ 013$	$\cdot 0003\ 325^-$	$\cdot 0001\ 816$
$\cdot 0047\ 618$	$\cdot 0028\ 217$	$\cdot 0016\ 470$	$\cdot 0009\ 479$	$\cdot 0005\ 383$	$\cdot 0003\ 019$
$\cdot 0068\ 132$	$\cdot 0041\ 413$	$\cdot 0024\ 799$	$\cdot 0014\ 643$	$\cdot 0008\ 533$	$\cdot 0004\ 910$
$\cdot 0095\ 826$	$\cdot 0059\ 703$	$\cdot 0036\ 650^+$	$\cdot 0022\ 187$	$\cdot 0013\ 256$	$\cdot 0007\ 822$
$\cdot 0132\ 579$	$\cdot 0084\ 604$	$\cdot 0053\ 203$	$\cdot 0032\ 997$	$\cdot 0020\ 200$	$\cdot 0012\ 214$
$\cdot 0180\ 547$	$\cdot 0117\ 926$	$\cdot 0075\ 912$	$\cdot 0048\ 202$	$\cdot 0030\ 213$	$\cdot 0018\ 708$
$\cdot 0242\ 153$	$\cdot 0161\ 775^+$	$\cdot 0106\ 534$	$\cdot 0069\ 210$	$\cdot 0044\ 389$	$\cdot 0028\ 127$
$\cdot 0320\ 043$	$\cdot 0218\ 549$	$\cdot 0147\ 134$	$\cdot 0097\ 734$	$\cdot 0064\ 100$	$\cdot 0041\ 539$
$\cdot 0417\ 028$	$\cdot 0290\ 902$	$\cdot 0200\ 090$	$\cdot 0135\ 812$	$\cdot 0091\ 031$	$\cdot 0060\ 294$
$\cdot 0535\ 999$	$\cdot 0381\ 693$	$\cdot 0268\ 067$	$\cdot 0185\ 812$	$\cdot 0127\ 206$	$\cdot 0086\ 064$
$\cdot 0679\ 820$	$\cdot 0493\ 911$	$\cdot 0353\ 972$	$\cdot 0250\ 417$	$\cdot 0174\ 994$	$\cdot 0120\ 871$
$\cdot 0851\ 203$	$\cdot 0630\ 569$	$\cdot 0460\ 881$	$\cdot 0332\ 582$	$\cdot 0237\ 106$	$\cdot 0167\ 103$
$\cdot 1052\ 567$	$\cdot 0794\ 581$	$\cdot 0591\ 944$	$\cdot 0435\ 474$	$\cdot 0316\ 556$	$\cdot 0227\ 510$
$\cdot 1285\ 882$	$\cdot 0988\ 613$	$\cdot 0750\ 256$	$\cdot 0562\ 369$	$\cdot 0416\ 600$	$\cdot 0305\ 175^-$
$\cdot 1552\ 523$	$\cdot 1214\ 925^-$	$\cdot 0938\ 708$	$\cdot 0716\ 533$	$\cdot 0540\ 645^+$	$\cdot 0403\ 452$
$\cdot 1853\ 122$	$\cdot 1475\ 206$	$\cdot 1159\ 818$	$\cdot 0901\ 062$	$\cdot 0692\ 117$	$\cdot 0525\ 881$
$\cdot 2187\ 443$	$\cdot 1770\ 411$	$\cdot 1415\ 555^+$	$\cdot 1118\ 710$	$\cdot 0874\ 308$	$\cdot 0676\ 049$
$\cdot 2554\ 292$	$\cdot 2100\ 620$	$\cdot 1707\ 163$	$\cdot 1371\ 699$	$\cdot 1090\ 188$	$\cdot 0857\ 435^-$
$\cdot 2951\ 455^+$	$\cdot 2464\ 917$	$\cdot 2034\ 994$	$\cdot 1661\ 522$	$\cdot 1342\ 204$	$\cdot 1073\ 210$
$\cdot 3375\ 692$	$\cdot 2861\ 312$	$\cdot 2398\ 369$	$\cdot 1988\ 766$	$\cdot 1632\ 069$	$\cdot 1326\ 024$
$\cdot 3822\ 779$	$\cdot 3286\ 712$	$\cdot 2795\ 480$	$\cdot 2352\ 943$	$\cdot 1960\ 561$	$\cdot 1617\ 776$
$\cdot 4287\ 604$	$\cdot 3736\ 950^-$	$\cdot 3223\ 339$	$\cdot 2752\ 381$	$\cdot 2327\ 341$	$\cdot 1949\ 395^+$
$\cdot 4764\ 318$	$\cdot 4206\ 866$	$\cdot 3677\ 794$	$\cdot 3184\ 146$	$\cdot 2730\ 812$	$\cdot 2320\ 636$
$\cdot 5246\ 530$	$\cdot 4690\ 459$	$\cdot 4153\ 597$	$\cdot 3644\ 046$	$\cdot 3168\ 040$	$\cdot 2729\ 924$
$\cdot 5727\ 541$	$\cdot 5181\ 083$	$\cdot 4644\ 561$	$\cdot 4126\ 700$	$\cdot 3634\ 733$	$\cdot 3174\ 252$
$\cdot 6200\ 600$	$\cdot 5671\ 697$	$\cdot 5143\ 756$	$\cdot 4625\ 684$	$\cdot 4125\ 314$	$\cdot 3649\ 162$
$\cdot 6659\ 177$	$\cdot 6155\ 143$	$\cdot 5643\ 778$	$\cdot 5133\ 746$	$\cdot 4633\ 066$	$\cdot 4148\ 807$
$\cdot 7097\ 220$	$\cdot 6624\ 441$	$\cdot 6137\ 050^-$	$\cdot 5638\ 800$		

TABLES OF THE INCOMPLETE β -FUNCTION $= .26 \text{ to } .94$ $q = 15$ $p =$

$p = 27$	$p = 28$	$p = 29$	$p = 30$	$p = 31$	$p = 32$
$(p, q) = .1050\ 9897 \times \frac{1}{10^{11}}$	$.6756\ 3623 \times \frac{1}{10^{11}}$	$.4399\ 4917 \times \frac{1}{10^{11}}$	$.2899\ 6650 \times \frac{1}{10^{11}}$	$.1933\ 1100 \times \frac{1}{10^{11}}$	$.1302\ 74$
π					
.26 .0000 001					
.27 .0000 002	.0000 001				
.28 .0000 005 ⁺	.0000 002	.0000 001			
.29 .0000 011	.0000 005 ⁻	.0000 002	.0000 001		
.30 .0000 023	.0000 010	.0000 005 ⁻	.0000 002	.0000 001	
.31 .0000 046	.0000 021	.0000 010	.0000 004	.0000 002	.0000 001
.32 .0000 090	.0000 043	.0000 020	.0000 009	.0000 004	.0000 002
.33 .0000 170	.0000 083	.0000 040	.0000 019	.0000 009	.0000 004
.34 .0000 313	.0000 158	.0000 079	.0000 039	.0000 019	.0000 009
.35 .0000 560	.0000 291	.0000 149	.0000 076	.0000 038	.0000 019
.36 .0000 980	.0000 523	.0000 276	.0000 144	.0000 075 ⁻	.0000 038
.37 .0001 673	.0000 917	.0000 497	.0000 267	.0000 142	.0000 075
.38 .0002 792	.0001 570	.0000 874	.0000 481	.0000 263	.0000 142
.39 .0004 562	.0002 631	.0001 502	.0000 849	.0000 475 ⁻	.0000 263
.40 .0007 300	.0004 315 ⁺	.0002 524	.0001 462	.0000 839	.0000 475
.41 .0011 450 ⁺	.0006 932	.0004 153	.0002 464	.0001 448	.0000 839
.42 .0017 619	.0010 917	.0006 695 ⁺	.0004 066	.0002 446	.0001 448
.43 .0026 614	.0016 868	.0010 582	.0006 574	.0004 047	.0002 446
.44 .0039 487	.0025 585 ⁻	.0016 409	.0010 423	.0006 560	.0004 047
.45 .0057 581	.0038 118	.0024 980	.0016 214	.0010 428	.0006 560
.46 .0082 568	.0055 813	.0037 352	.0024 761	.0016 266	.0010 428
.47 .0116 486	.0080 360	.0054 891	.0037 142	.0024 907	.0016 266
.48 .0161 754	.0113 824	.0079 315 ⁺	.0054 754	.0037 463	.0024 907
.49 .0221 177	.0158 676	.0112 738	.0079 362	.0055 375 ⁺	.0037 463
.50 .0297 919	.0217 793	.0157 697	.0113 144	.0080 472	.0055 375
.51 .0395 449	.0294 437	.0217 162	.0158 727	.0115 017	.0082 651
.52 .0517 442	.0392 201	.0294 513	.0219 192	.0161 747	.0118 381
.53 .0667 651	.0514 911	.0393 482	.0298 056	.0223 878	.0166 800
.54 .0849 738	.0666 491	.0518 061	.0399 214	.0305 088	.0231 300
.55 .1067 062	.0850 781	.0672 349	.0526 835 ⁺	.0409 454	.0315 733
.56 .1322 454	.1071 320	.0860 368	.0685 205 ⁺	.0541 338	.0424 381
.57 .1617 966	.1331 096	.1085 822	.0878 523	.0705 221	.0561 822
.58 .1954 633	.1632 279	.1351 831	.1110 646	.0905 478	.0732 733
.59 .2332 249	.1975 962	.1660 648	.1384 803	.1146 105 ⁻	.0941 071
.60 .2749 192	.2361 915 ⁺	.2013 366	.1703 277	.1430 400	.1192 733
.61 .3202 311	.2788 395 ⁻	.2409 661	.2067 104	.1760 629	.1480 251
.62 .3686 899	.3252 021	.2847 585 ⁻	.2475 782	.2137 689	.1833 400
.63 .4196 760	.3747 748	.3323 431	.2927 060	.2560 814	.2225 871
.64 .4724 384	.4268 940	.3831 714	.3416 802	.3027 338	.2665 511
.65 .5261 216	.4807 567	.4365 261	.3938 968	.3532 570	.3149 111
.66 .5798 027	.5354 512	.4915 433	.4485 741	.4069 799	.3671 300
.67 .6325 345 ⁺	.5899 975 ⁺	.5472 479	.5047 783	.4630 449	.4224 511
.68 .6833 927	.6433 957	.6025 987	.5614 640	.5204 391	.4799 411
.69 .7315 237	.6946 779	.6565 424	.6175 259	.5780 412	.5384 911
.70 .7761 885 ⁻	.7429 605 ⁺	.7080 712	.6718 584	.6346 800	.5969 011
.71 .8167 995 ⁻	.7874 917	.7562 789	.7234 193	.6892 016	.6530 311
.72 .8529 469	.8276 897	.8004 119	.7712 905 ⁻	.7405 383	.7083 071

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .32$ to $.95$ $q = 15$

	$p = 33$	$p = 34$	$p = 35$	$p = 36$	$p = 37$
$B(p, q) = .8869\ 7739 \times \frac{1}{10^3}$		$.6097\ 9695 \times \frac{1}{10^3}$	$.4231\ 2442 \times \frac{1}{10^3}$	$.2961\ 8709 \times \frac{1}{10^3}$	$.2090\ 7$
$\cdot 32$	.0000 00I				
$\cdot 33$	.0000 002	.0000 00I			
$\cdot 34$	.0000 004	.0000 002	.0000 00I		
$\cdot 35$	.0000 009	.0000 005 ⁻	.0000 002	.0000 00I	.0000 00
$\cdot 36$	.0000 019	.0000 010	.0000 005 ⁻	.0000 002	.0000 00
$\cdot 37$	.0000 039	.0000 020	.0000 010	.0000 005 ⁺	.0000 00
$\cdot 38$	.0000 076	.0000 041	.0000 021	.0000 01I	.0000 00
$\cdot 39$	.0000 145 ⁻	.0000 079	.0000 043	.0000 023	.0000 01
$\cdot 40$	.0000 269	.0000 150 ⁺	.0000 083	.0000 046	.0000 02
$\cdot 41$	.0000 487	.0000 279	.0000 159	.0000 090	.0000 03
$\cdot 42$	.0000 863	.0000 506	.0000 294	.0000 170	.0000 06
$\cdot 43$	.0001 494	.0000 897	.0000 534	.0000 316	.0000 11
$\cdot 44$	.0002 532	.0001 554	.0000 947	.0000 572	.0000 3
$\cdot 45$	.0004 204	.0002 637	.0001 642	.0001 015 ⁻	.0000 6
$\cdot 46$	.0006 842	.0004 385 ⁻	.0002 789	.0001 76I	.0001 1
$\cdot 47$	.0010 920	.0007 145 ⁻	.0004 640	.0002 992	.0001 9
$\cdot 48$	.0017 103	.0011 419	.0007 568	.0004 980	.0002 3
$\cdot 49$	.0026 296	.0017 910	.0012 108	.0008 128	.0005 4
$\cdot 50$	.0039 714	.0027 576	.0019 008	.0013 01I	.0008 8
$\cdot 51$	.0058 935 ⁻	.0041 703	.0029 296	.0020 437	.0014 1
$\cdot 52$	.0085 973	.0061 968	.0044 345 ⁺	.0031 516	.0022 2
$\cdot 53$	.0123 329	.0090 509	.0065 95I	.0047 730	.0034 3
$\cdot 54$	.0174 031	.0129 982	.0096 40I	.0071 014	.0051 9
$\cdot 55$	.0241 644	.0183 604	.0138 537	.0103 836	.0077 3
$\cdot 56$	.0330 243	.0255 155 ⁺	.0195 792	.0149 25I	.0113 0
$\cdot 57$	.0444 334	.0348 95I	.0272 196	.0210 946	.0162 4
$\cdot 58$	.0588 719	.0469 749	.0372 334	.0293 233	.0229 5
$\cdot 59$	.0768 286	.0622 590	.0501 234	.0400 993	.0318 8
$\cdot 60$	.0987 743	.0812 57I	.0664 190	.0539 550 ⁺	.0435 6
$\cdot 61$	.1251 285 ⁻	.1044 543	.0866 503	.0714 456	.0585 6
$\cdot 62$	.1562 214	.1322 743	.1113 135 ⁻	.0931 195 ⁺	.0774 5
$\cdot 63$	.1922 548	.1650 379	.1408 310	.1194 804	.1007 9
$\cdot 64$	.2332 634	.2029 210	.1755 057	.1509 416	.1291 0
$\cdot 65$	.2790 820	.2459 128	.2154 752	.1877 770	.1627 7
$\cdot 66$	.3293 224	.2937 832	.2606 69I	.2300 716	.2020 2
$\cdot 67$	.3833 633	.3460 597	.3107 749	.2776 777	.2468 7
$\cdot 68$	.4403 59I	.4020 22I	.3652 187	.3301 818	.2970 9
$\cdot 69$	.4992 657	.4607 162	.4231 644	.3868 894	.3521 2
$\cdot 70$	.5588 877	.5209 888	.4835 356	.4468 316	.4111 4
$\cdot 71$	.6179 415 ⁺	.5815 442	.5450 613	.5087 973	.4730 3
$\cdot 72$	.6751 313	.6410 186	.6063 440	.5713 920	.5364 4
$\cdot 73$	.7292 315 ⁺	.6980 653	.6659 458	.6331 196	.5998 3
$\cdot 74$	.7791 675 ⁻	.7514 457	.7224 847	.6924 810	.6616 4
$\cdot 75$	.8240 849	.8001 134	.7747 318	.7480 81I	.7203 2
$\cdot 76$	.8634 024	.8432 84I	.8216 984	.7987 312	.7744 8

TABLES OF THE INCOMPLETE β -FUNCTION

to 96

$q = 15$

$p = 39$ to

$p = 39$	$p = 40$	$p = 41$	$p = 42$	$p = 43$	$p = 44$
$= .1066\ 6073 \times \frac{1}{10^{13}}$	$.7703\ 2751 \times \frac{1}{10^{14}}$	$.5602\ 3819 \times \frac{1}{10^{14}}$	$.4101\ 7439 \times \frac{1}{10^{14}}$	$.3022\ 3376 \times \frac{1}{10^{14}}$	$.2240\ 6986 \times \frac{1}{10^{14}}$
.0000 001					
.0000 002	.0000 001				
.0000 003	.0000 002	.0000 001			
.0000 007	.0000 004	.0000 002	.0000 001	.0000 001	
.0000 015 ⁺	.0000 008	.0000 005 ⁻	.0000 003	.0000 001	.0000 001
.0000 032	.0000 018	.0000 010	.0000 006	.0000 003	.0000 002
.0000 063	.0000 036	.0000 021	.0000 012	.0000 007	.0000 004
.0000 121	.0000 072	.0000 042	.0000 024	.0000 014	.0000 008
.0000 230	.0000 139	.0000 083	.0000 049	.0000 029	.0000 017
.0000 426	.0000 262	.0000 160	.0000 097	.0000 059	.0000 035 ⁺
.0000 770	.0000 484	.0000 302	.0000 188	.0000 116	.0000 071
.0001 364	.0000 875 ⁻	.0000 558	.0000 354	.0000 223	.0000 140
.0002 363	.0001 547	.0001 006	.0000 651	.0000 419	.0000 208
.0004 012	.0002 677	.0001 776	.0001 172	.0000 769	.0000 502
.0006 673	.0004 540	.0003 071	.0002 066	.0001 382	.0000 920
.0010 884	.0007 544	.0005 200	.0003 565 ⁻	.0002 431	.0001 649
.0017 411	.0012 292	.0008 630	.0006 026	.0004 186	.0002 893
.0027 329	.0019 644	.0014 042	.0009 983	.0007 061	.0004 970
.0042 107	.0030 802	.0022 409	.0016 216	.0011 674	.0008 303
.0063 699	.0047 404	.0035 085 ⁺	.0025 831	.0018 921	.0013 792
.0094 642	.0071 623	.0053 911	.0040 367	.0030 074	.0022 296
.0138 139	.0106 270	.0081 317	.0061 902	.0046 888	.0035 345 ⁻
.0198 118	.0154 875 ⁺	.0120 432	.0093 172	.0071 727	.0054 955 ⁻
.0279 254	.0221 746	.0175 164	.0137 672	.0107 678	.0083 822
.0386 916	.0311 968	.0250 247	.0199 742	.0158 665 ⁻	.0125 449
.0527 041	.0431 331	.0351 221	.0284 593	.0229 514	.0184 246
.0705 901	.0586 162	.0484 323	.0398 257	.0325 961	.0265 586
.0929 758	.0783 039	.0656 274	.0547 441	.0454 570	.0375 781
.1204 409	.1028 385 ⁺	.0873 924	.0739 241	.0622 516	.0521 943
.1534 633	.1327 939	.1143 775 ⁻	.0980 722	.0837 235 ⁺	.0711 701
.1923 580	.1686 138	.1471 372	.1278 345 ⁻	.1105 907	.0952 758
.2372 151	.2105 448	.1860 614	.1637 279	.1434 787	.1252 263
.2878 445 ⁺	.2585 713	.2313 033	.2060 637	.1828 433	.1616 048
.3437 353	.3123 611	.2827 124	.2548 716	.2288 869	.2047 754
.4040 379	.3712 302	.3397 839	.3098 333	.2814 801	.2547 951
.4675 763	.4341 361	.4016 322	.3702 383	.3401 001	.3113 356
.5328 947	.4997 069	.4670 003	.4349 717	.4037 973	.3736 306
.5983 389	.5663 081	.5343 093	.5025 446	.4712 035 ⁻	.4404 600
.6621 668	.6321 461	.6017 502	.5711 690	.5405 877	.5101 842
.7226 795 ⁻	.6954 004	.6674 121	.6388 776	.6099 627	.5808 327
.7783 572	.7543 696	.7294 345 ⁻	.7036 784	.6772 354	.6502 451
.8279 839	.8076 153	.7861 672	.7637 252	.7403 854	.7162 533
.8707 428	.8540 827	.8363 147	.8174 850 ⁺	.7976 511	.7768 808
.9062 689	.8931 804	.8790 448	.8638 749	.8476 937	.8305 341

TABLE I. THE $I_x(p, q)$ FUNCTION $x = .42$ to $.96$ $q = 15$

	$p = 45$	$p = 46$	$p = 47$	$p = 48$	$p = 49$
$B(p, q) = .1671 \ 0294 \times \frac{1}{10^{14}}$	$.1253 \ 2721 \times \frac{1}{10^{14}}$	$.9450 \ 9042 \times \frac{1}{10^{15}}$	$.7164 \ 3951 \times \frac{1}{10^{15}}$	$.5458 \ 5101 \times \frac{1}{10^{15}}$	
x					
.42	.0000 001				
.43	.0000 002	.0000 001	.0000 001		
.44	.0000 005	.0000 003	.0000 002	.0000 001	
.45	.0000 010	.0000 006	.0000 003	.0000 002	.0000 001
.46	.0000 021	.0000 013	.0000 008	.0000 004	.0000 002
.47	.0000 044	.0000 027	.0000 016	.0000 010	.0000 005
.48	.0000 087	.0000 054	.0000 034	.0000 021	.0000 010
.49	.0000 171	.0000 108	.0000 068	.0000 043	.0000 021
.50	.0000 327	.0000 211	.0000 136	.0000 087	.0000 043
.51	.0000 610	.0000 402	.0000 264	.0000 172	.0000 108
.52	.0001 114	.0000 748	.0000 501	.0000 333	.0000 211
.53	.0001 990	.0001 362	.0000 928	.0000 630	.0000 402
.54	.0003 481	.0002 427	.0001 684	.0001 164	.0000 816
.55	.0005 962	.0004 231	.0002 989	.0002 103	.0001 402
.56	.0010 005 ⁺	.0007 225 ⁺	.0005 195 ⁻	.0003 719	.0002 103
.57	.0016 453	.0012 085 ⁺	.0008 839	.0006 437	.0004 231
.58	.0026 519	.0019 808	.0014 731	.0010 909	.0008 839
.59	.0041 911	.0031 820	.0024 055 ⁺	.0018 109	.0013 402
.60	.0064 955 ⁻	.0050 112	.0038 496	.0029 450 ⁺	.0022 402
.61	.0098 741	.0077 380	.0060 385 ⁻	.0046 929	.0036 380
.62	.0147 250 ⁺	.0117 177	.0092 857	.0073 287	.0057 380
.63	.0215 447	.0174 033	.0140 001	.0112 174	.0089 741
.64	.0309 312	.0253 537	.0206 977	.0168 302	.0136 174
.65	.0435 770	.0362 331	.0300 068	.0247 541	.0203 302
.66	.0602 487	.0507 980	.0426 621	.0356 930	.0297 541
.67	.0817 499	.0698 682	.0594 846	.0504 554	.0426 621
.68	.1088 654	.0942 788	.0813 411	.0699 230	.0598 846
.69	.1422 874	.1248 115 ⁺	.1090 833	.0949 981	.0824 788
.70	.1825 272	.1621 082	.1434 648	.1205 270	.1012 874
.71	.2298 203	.2065 716	.1850 413	.1652 013	.1470 272
.72	.2840 355 ⁻	.2582 642	.2340 616	.2114 450 ⁺	.1904 413
.73	.3446 020	.3168 184	.2903 636	.2652 990	.2416 616
.74	.4104 712	.3813 753	.3532 915 ⁺	.3263 191	.3005 712
.75	.4801 263	.4505 693	.4216 548	.3935 094	.3662 915
.76	.5516 496	.5225 703	.4937 439	.4653 100	.4373 548
.77	.6228 500 ⁻	.5951 931	.5674 159	.5396 565 ⁺	.5120 703
.78	.6914 410	.6660 663	.6402 503	.6141 157	.5877 931
.79	.7552 513	.7328 480	.7097 629	.6860 933	.6619 663
.80	.8124 385 ⁻	.7934 582	.7736 527	.7530 886	.7318 480
.81	.8616 721	.8462 929	.8300 444	.8129 628	.7950 721
.82	.9022 552	.8903 835 ⁻	.8776 859	.8641 724	.8498 444
.83	.9341 606	.9254 699	.9160 614	.9059 262	.8950 859
.84	.9579 739	.9519 736	.9453 994	.9382 321	.9304 614
.85	.9747 554	.9708 737	.9665 700	.9618 223	.9566 736
.86	.9858 479	.9835 137	.9808 952	.9779 725 ⁺	.9747 554
.87				.9822 552	.9808 952
.88				.9892 752	.9892 752
.89				.9982 552	.9982 552
.90				1.0000 000	1.0000 000